



## **Hill Air Force Base, Utah**

---

### *Environmental Assessment*

---

### **Final Report**

### **Construction and Operation of New Security Forces Facility**

---

**October 2008**

Report Documentation Page				Form Approved OMB No. 0704-0188	
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE <b>OCT 2008</b>		2. REPORT TYPE		3. DATES COVERED <b>00-00-2008 to 00-00-2008</b>	
4. TITLE AND SUBTITLE <b>Environmental Assessment: Construction and Operation of New Security Forces Facility at Hill Air Force Base, Utah</b>				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) <b>CH2M HILL,215 South State, Suite 1000,Salt Lake City,UT,84111</b>				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT <b>Approved for public release; distribution unlimited</b>					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT <b>Same as Report (SAR)</b>	18. NUMBER OF PAGES <b>71</b>	19a. NAME OF RESPONSIBLE PERSON
a. REPORT <b>unclassified</b>	b. ABSTRACT <b>unclassified</b>	c. THIS PAGE <b>unclassified</b>			

**FINAL**  
**FINDING OF NO SIGNIFICANT IMPACT**  
**CONSTRUCTION AND OPERATION OF A**  
**NEW SECURITY FORCES FACILITY AT HILL AIR FORCE BASE, UTAH**

**Agency**

U.S. Air Force, Hill Air Force Base, Civil Engineering Environmental Management Division

**Background**

The United States Air Force (USAF or Air Force) prepared an Environmental Assessment (EA) to assess the potential environmental consequences of activities associated with constructing and operating a new Security Forces facility at Hill Air Force Base, Utah. This EA was prepared in accordance with the Council on Environmental Quality's implementing regulations under the National Environmental Policy Act (NEPA) (40 *Code of Federal Regulations* [CFR] 1500 through 1508) and supplemental Air Force regulations (32 CFR 989).

**Proposed Action and Alternatives**

The Proposed Action involves construction of a new 35,000-square-foot facility for the Security Forces Division. The new facility would be located on approximately 6.5 acres of land and would be used for administrative and storage functions. In addition to the Proposed Action, one action alternative (Alternative B) and a No Action Alternative were considered. Alternative B involved constructing the facility in an alternate location.

**Factors Considered in Determining That No Environmental Impact Statement is Required**

The EA, which is incorporated by reference, analyzed the environmental impacts of implementing the Proposed Action, Alternative B, and the No-Action Alternative by taking into account relevant environmental resource areas and conditions. The following resources were eliminated from detailed analysis in this EA due to the absence of these resources at or adjacent to the project area or because accepted engineering or design techniques would ensure that no significant adverse impacts would occur: water resources (surface hydrology and groundwater), transportation, cultural resources, natural resources, socioeconomic resources, and environmental justice. The USAF has examined the following resource areas and found that implementing the Proposed Action would not result in any significant impacts: airfield operations, noise, air quality, safety and occupational health, earth resources, infrastructure and utilities, hazardous material and waste, and Environmental Restoration Program sites. Potential cumulative environmental impacts were also considered.

**Public Notice**

Per 32 CFR 989.15(5)(e), the USAF is required to make the draft EA and draft finding of no significant impact (FONSI) available for public review before approval of the FONSI and implementation of the Proposed Action. The public review period ended on September 30, 2008. The USAF received no comments on the Draft EA or Draft FONSI.

**Finding of No Significant Impact**

Based on the requirements of NEPA, 40 CFR 1500-1508, and 32 CFR 989, I conclude that the environmental effects of implementing the Proposed Action or alternatives are not significant, and, therefore, an environmental impact statement will not be prepared. A notice of availability indicating a 15-day public review period for the EA was published in the *Ogden Standard Examiner* and *Hilltop Times* on September 15, 2008. The signing of this FONSI completes the USAF NEPA requirements.

  
HARRY BRIESMASTER III, Colonel, USAF  
Commander, 75th Civil Engineer Group

21 OCT 08  
Date



# *Environmental Assessment*

## Construction and Operation of New Security Forces Facility at Hill Air Force Base, Utah

Prepared for:

UNITED STATES AIR FORCE  
Hill Air Force Base

Prepared by:

**CH2MHILL**  
215 South State, Suite 1000  
Salt Lake City, Utah 84111

OCTOBER 2008



# Contents

---

<b>Acronyms and Abbreviations .....</b>	<b>v</b>
<b>1.0 Purpose of and Need for Action .....</b>	<b>1-1</b>
1.1 Introduction.....	1-1
1.2 Project Location .....	1-1
1.3 Purpose and Need .....	1-1
1.4 Relevant Plans, Laws, and Regulations.....	1-2
1.5 Related Environmental Documents.....	1-7
1.6 Decisions that Must Be Made .....	1-7
1.7 Scope of this Environmental Analysis.....	1-7
1.8 Applicable Permits, Licenses, and Other Requirements.....	1-8
<b>2.0 Alternatives Including the Proposed Action.....</b>	<b>2-1</b>
2.1 Introduction.....	2-1
2.2 Alternative Selection Criteria.....	2-1
2.3 Alternatives Considered But Eliminated from Detailed Analysis .....	2-2
2.3.1 Alternative A – Construct Security Forces Facility within Base Boundary on Enhanced-Use Lease Property .....	2-2
2.4 Description of Alternatives Analyzed in Detail .....	2-2
2.4.1 No-Action Alternative .....	2-2
2.4.2 Proposed Action .....	2-2
2.4.3 Alternative B – Construction of Security Forces Facility on North Side of Wardleigh Road .....	2-4
2.5 Summary Comparison of Alternatives.....	2-6
2.6 Identification of the Preferred Alternative.....	2-6
<b>3.0 Affected Environment and Environmental Consequences .....</b>	<b>3-1</b>
3.1 Resource Categories Eliminated from Further Study .....	3-1
3.1.1 Water Resources .....	3-1
3.1.2 Transportation .....	3-2
3.1.3 Cultural Resources .....	3-2
3.1.4 Natural Resources .....	3-5
3.1.5 Socioeconomic Resources.....	3-7
3.1.6 Environmental Justice.....	3-7
3.2 Description of Relevant Affected Resources .....	3-7
3.2.1 Airfield Operations .....	3-7
3.2.2 Noise.....	3-7
3.2.3 Air Quality.....	3-8
3.2.4 Safety and Occupational Health.....	3-8
3.2.5 Earth Resources .....	3-11
3.2.6 Infrastructure and Utilities.....	3-11
3.2.7 Hazardous Material and Waste.....	3-11
3.2.8 Environmental Restoration Program Sites .....	3-11

<b>4.0</b>	<b>Environmental Consequences.....</b>	<b>4-1</b>
4.1	Predicted Effects on Relevant Affected Resources of All Alternatives.....	4-1
4.1.1	Noise.....	4-1
4.1.2	Air Quality.....	4-2
4.1.3	Safety and Occupational Health.....	4-4
4.1.4	Earth Resources .....	4-5
4.1.5	Infrastructure and Utilities.....	4-5
4.1.6	Hazardous Materials and Waste .....	4-6
4.1.7	Environmental Restoration Program Sites .....	4-7
4.2	Cumulative Impacts.....	4-7
4.2.1	Anticipated Cumulative Impacts .....	4-7
4.3	Unavoidable Adverse Environmental Impacts.....	4-8
4.4	Relationship between the Short-term Use of the Environment and Long-term Productivity .....	4-8
4.5	Irreversible and Irretrievable Commitments of Resources .....	4-9
<b>5.0</b>	<b>List of Preparers .....</b>	<b>5-1</b>
<b>6.0</b>	<b>References .....</b>	<b>6-1</b>
<b>7.0</b>	<b>List of Persons and Agencies Consulted.....</b>	<b>7-1</b>

## Tables

1-1	List of Relevant Planning Documents and Guidance
2-1	Comparison Matrix of Environmental Impacts
3-1	Hill Air Force Base Wildlife Species
4-1	Typical Construction Equipment and Composite Site Noise Levels
4-2	Maximum Calculated Emissions

## Figures

1-1	Location Map
1-2	Site Map
3-1	Surface Water Drainage Map
3-2	AICUZ Noise Contours
3-3	ERP Monitoring Points

## Appendices

A	SHPO Consultation
---	-------------------



# Acronyms and Abbreviations

---

ABW	Air Base Wing
AFB	Air Force Base
AFOSH	Air Force Occupational and Environmental Safety, Fire Protection, and Health
AICUZ	Airport Installation Compatible Use Zone
amsl	Above Mean Sea Level
APE	Area of Potential Effect
AT/FP	Antiterrorism/Force Protection
BMP	Best Management Practice
CAA	Clean Air Act
CEG/CEV	Civil Engineering Group Environmental Division
CFR	<i>Code of Federal Regulations</i>
CO	Carbon Monoxide
CWA	Clean Water Act
dB	Decibel
DNL	Day-Night Average Sound Level
DoD	Department of Defense
EA	Environmental Assessment
EIS	Environmental Impact Statement
ERP	Environmental Restoration Program
EUL	Enhanced Use Lease
FONSI	Finding of No Significant Impact
HVAC	Heating, Ventilation, and Air Conditioning
I-15	U.S. Interstate 15
ICRMP	Integrated Cultural Resources Management Plan
INRMP	Integrated Natural Resources Management Plan
IRP	Installation Remediation Project
IWTP	Industrial Wastewater Treatment Plant
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act of 1969
NO <sub>x</sub>	Nitrogen Oxides
OO-ALC	Ogden Air Logistics Center
OSHA	Occupational Safety and Health Administration
OU	Operable Unit
PM <sub>10</sub>	Particulate Matter Less than 10 Micrometers in Aerodynamic Diameter

PM <sub>2.5</sub>	Particulate Matter less than 2.5 Micrometers in Aerodynamic Diameter
SHPO	State Historic Preservation Office or Officer
SFS	Security Forces Squadron
SIP	State Implementation Plan
SO <sub>x</sub>	Sulfur Oxide
tpy	Tons per Year
TSP	Total Suspended Particulate
UFC	Unified Facilities Criteria
USC	United States Code
VOC	Volatile Organic Compounds
WSD	West Side Development

# 1.0 Purpose of and Need for Action

---

**1.0.0.1** This section presents the purpose and need for the Proposed Action, including a brief introduction to the project and its location, the scope of the analysis, and the Air Force decisions to be made.

## 1.1 Introduction

**1.1.0.1** This environmental assessment (EA) evaluates the impacts of the Air Force constructing and operating a new Security Forces Facility at Hill Air Force Base (AFB). This EA has been prepared in accordance with the Council on Environmental Quality's implementing regulations under the National Environmental Policy Act (NEPA) (40 *Code of Federal Regulations* [CFR] 1500 through 1508) and supplemental Air Force regulations (32 CFR 989).

## 1.2 Project Location

**1.2.0.1** Hill AFB is an Air Force Materiel Command base located in northern Utah (see Figure 1-1) and is the home installation for numerous operational and support missions. The Ogden Air Logistics Center (OO-ALC) is the host organization and the 75th Air Base Wing (ABW) provides needed support. The OO-ALC provides worldwide engineering and logistics management for the F-16 Fighting Falcon, the A-10 Thunderbolt II, and the Minuteman III Inter-Continental Ballistic Missile. The 75th ABW provides Base operating support for the OO-ALC, 388th and 419th Fighter Wings, 84th Combat Sustainment Wing, 309th Maintenance Wing, 508th Aircraft Sustainment Wing, and 25 associate units.

**1.2.0.2** The location of the Proposed Action is within the current boundary of Hill AFB. Hill AFB is located in northern Utah, approximately 25 miles north of Salt Lake City and 5 miles south of Ogden, as shown in Figure 1-1. The Base occupies approximately 6,700 acres in Davis and Weber Counties. The western boundary of the Base is U.S. Interstate 15 (I-15), and the southern boundary is State Route 193.

**1.2.0.3** The location of the planned construction is in the southern central portion of the Base. The Proposed Action site is located south of the Wardleigh Road/F Avenue intersection along the eastern side of F Avenue. Alternative B is located on the east side of Wardleigh Road. The Proposed Action and Alternative B locations and site layouts are shown in Figure 1-2.

## 1.3 Purpose and Need

**1.3.0.1** The 75th Security Forces Squadron (SFS) provides force protection, physical security, law enforcement, and combat arms training for the five wings of the OO-ALC, 388th Fighter Wing, 419th Fighter Wing, and 46 associate units. The 75th SFS is currently located in Building 1219.

1.3.0.2 Building 1219 is scheduled for demolition during initial phases of the Hill AFB West Side Development (WSD) Enhanced Use Lease (EUL) project. The WSD EUL project was evaluated in the *Final Environmental Assessment for the West Side Development Enhanced Use Lease at Hill Air Force Base, Utah* (CH2M HILL, 2008) and is incorporated by reference into this EA. Before demolition of structures within the WSD area can be initiated, new facilities must be constructed to allow relocation of existing workers. Therefore, a new SFS facility must be completed prior to demolition activities. This EA addresses only the construction and operation of the new SFS facility. As stated above, the demolition of the existing structure was covered in the prior EA. Demolition will not occur as part of this proposed project.

## 1.4 Relevant Plans, Laws, and Regulations

1.4.0.1 This section provides a list of several regulatory environmental programs and documents that apply to the Proposed Action.

- National Environmental Policy Act of 1969 (NEPA, 1969)
- Council on Environmental Quality (CEQ) regulations, 40 CFR Parts 1500-1508 (EPA, 1978).
- Title 32 of the CFR, Part 989, commonly written as 32 CFR 989 (Department of the Air Force, 1999), which implements AFI 32-1061 (Civil Engineering)
- Occupational Safety and Health Act (OSHA) of 1970 (OSHA, 2004)
- Air Force Instruction 91-301, *Air Force Occupational and Environmental Safety, Fire Protection, and Health (AFOSH) Program*, dated 1 June 1996
- Department of Defense (DoD) Instruction 2000.16 *Anti-terrorism Standards* (DoD, 2006)
- 1970 Clean Air Act (CAA) and its 1990 amendments (U.S. Environmental Protection Agency [EPA], 1990)
- Federal Air Quality Conformity Applicability – Title 40 of the CFR Part 93 Section 153 (designated as 40 CFR 93.153)
- Area Designation Recommendation for the 2006 Particulate Matter less than 2.5 Micrometers in Aerodynamic Diameter (PM<sub>2.5</sub>), National Ambient Air Quality Standards (NAAQS) (Utah Division of Air Quality, 2007)
- Clean Water Act (CWA) (EPA, 1977)
- Water Quality Act of 1987 (EPA, 1987)
- Endangered Species Act (U.S. Department of the Interior, 1973)
- The Sikes Act (16 United States Code [USC] §670a et seq.)
- Migratory Bird Treaty Act (16 USC Chapter 7, Subchapter II)

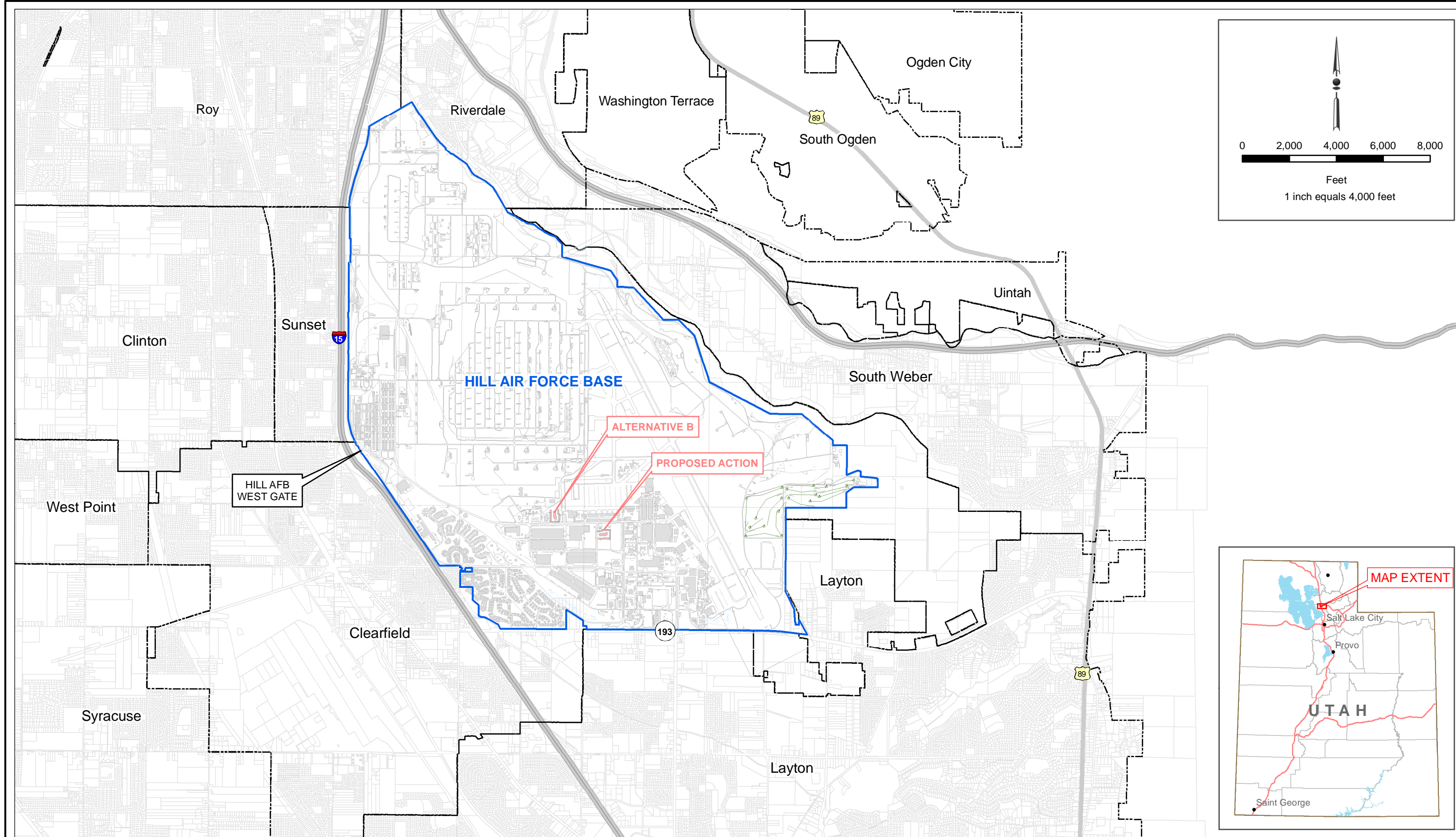


FIGURE 1-1  
**LOCATION MAP**  
SECURITY FORCES FACILITY EA  
HILL AIR FORCE BASE, UTAH



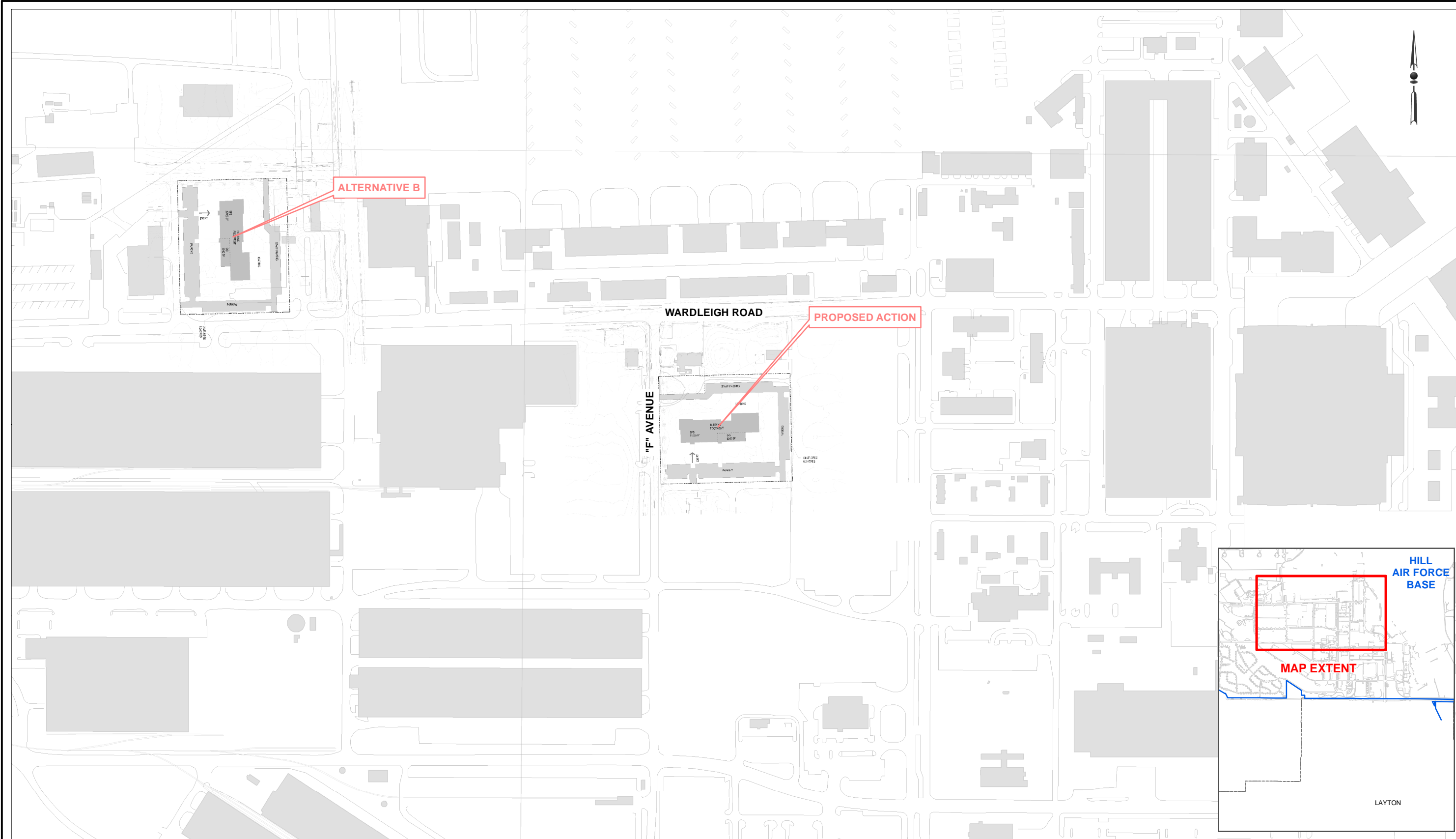


FIGURE 1-2  
**SITE MAP**  
SECURITY FORCES FACILITY EA  
HILL AIR FORCE BASE, UTAH





- Air Force Instruction 32-7064, *Integrated Natural Resources Management*, dated 17 September 2004
- Hill AFB *Integrated Natural Resource Management Plan* (INRMP) (Hill AFB, 2007a)
- National Historic Preservation Act of 1966 (16 USC 470 *et seq.*, Public Law 89-665 Stat. 915) as amended
- Hill AFB *Integrated Cultural Resources Management Plan* (ICRMP) (Hill AFB, 2007)
- Air Force Instruction 32-7065, *Cultural Resources Management*, dated 1 June 2004
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (U.S. Department of Housing and Urban Development, 1994)
- Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks (Presidential Documents, 1997)
- Resource Conservation and Recovery Act of 1976 (42 USC §6901–6992k) and its associated Hazardous and Solid Waste Amendments (40 CFR Parts 239–282)
- Utah Hazardous Waste Definitions and References (Utah Administrative Code Section R315)
- Air Force Instruction 32-7042, *Solid and Hazardous Waste Compliance*, dated 12 May 1994

## 1.5 Related Environmental Documents

1.5.0.1 The need to relocate personnel associated with the SFS is based on plans to demolish Building 1219, which is included in the WSD EUL Project. The WSD EUL Project was evaluated in the *Final Environmental Assessment for the West Side Development Enhanced Use Lease at Hill Air Force Base, Utah* (CH2M HILL, 2008) and is incorporated by reference.

## 1.6 Decisions that Must Be Made

1.6.0.1 Based on the identified impacts, the Air Force must decide whether a Finding of No Significant Impact (FONSI) is warranted and will be issued. If a FONSI is not warranted, the Air Force must decide whether to prepare an environmental impact statement (EIS) or abandon the Proposed Action.

1.6.0.2 This document will also provide Hill AFB with information that can be used to make project and operation decisions that properly consider the environmental impacts of those decisions during the earliest stages of the ongoing planning and design process.

## 1.7 Scope of this Environmental Analysis

1.7.0.1 This EA is designed to evaluate the impacts of implementing the Proposed Action to construct and operate a new Security Forces Facility. As a result, this EA will provide

information that is adequate to determine if a FONSI is appropriate or if an EIS should be prepared.

## 1.8 Applicable Permits, Licenses, and Other Requirements

1.8.0.1 The following relevant permits, licenses, or other requirements would be necessary for implementation of the action:

- Because the area to be redeveloped and disturbed by construction equipment exceeds 1 acre, coverage under a Utah General Stormwater Permit (Permit No. UTR100000) is necessary. This requires preparation of a Construction Stormwater Pollution Prevention Plan detailing how construction debris and sediment will be controlled. Prior to filing a Notice of Intent with the state of Utah Division of Water Quality, the document would be reviewed by 75 CEG/CEVOC.
- Before excavation or other construction activities begin at a specific site, the developer must complete an Air Force Form 103, Base Civil Engineering Work Clearance Request.
- Prior to any construction, the developer—in coordination with Hill AFB's Environmental Management Division—would prepare a contingency plan outlining steps to be taken if soil discoloration or hydrocarbon vapors are detected or groundwater is encountered during construction. The contingency plan must be approved by the Environmental Management Division prior to construction.
- The Hill AFB Fugitive Dust Control Plan addresses on-Base development and provides requirements to reduce fugitive dust during construction activities.
- The Air Force would apply for a modification to its Title V air quality permit for any covered Air Force sources relocated as a result of the Proposed Action.
- Prior to construction activities, subsurface asbestos and lead-based paint should be properly handled and disposed of to prevent human exposure and environmental contamination.
- If any issues arise during the course of action concerning petroleum; oil, lubricants, and/or storage tanks; asbestos or lead-based paint; unusual odors or soil discoloration; or if there are spill prevention/response questions or concerns, the construction contractor should contact Hill AFB's Environment Management Division.
- Hill AFB Fire Department approval must be obtained on all storage units to be used for flammable or corrosive materials on base.

1.8.0.2 Management plans are designed to provide broad guidelines and direction for conservation and management of specific resources. Table 1-1 lists plans that would be relevant to the Proposed Action.

**TABLE 1-1**  
List of Relevant Planning Documents and Guidance

<b>Reference Document</b>	<b>Resource</b>	<b>Management Recommendations</b>
Title V Operating Permit	Air Quality	Contains listings of pollutant emissions limits; methods of demonstrating compliance; and monitoring, testing, and recordkeeping requirements
Integrated Cultural Resources Management Plan	Cultural Resources	Contains listing of cultural resources on the installation and management practices and policies
The Secretary of the Interior's Standards for Historic Preservation Projects with Guidelines for Applying the Standards (Brown & Hume 1995)	Cultural Resources	Provides requirements and guidance for projects proposing changes or modifications to National Register of Historic Places eligible structures
Installation Environmental Noise Management Plan	Noise, Land Use	Management of noise complaints Mitigation of noise vibrations Noise abatement procedures Education of installation personnel and nearby residents Locations of no-fly zones and noise sensitive areas Noise zone and safety zone maps
Installation Design Guide	Geology and Soils, Land Use, Groundwater, Floodplains, Land Use	Provides standards, guidelines, and planning criteria
Integrated Wildland Fire Management Plan	Vegetation, Land Use	Smoke-sensitive areas Risk assessment and safety considerations Fire management zones Monitoring requirements Fire suppression and prevention Prescribed burns
Integrated Natural Resources Management Plan	Wildlife, Surface Water and Wetlands, Land Use, Threatened and Endangered	Natural resources on the Base Programs for natural feature inventory and monitoring Management of forestry, wildlife, fisheries, threatened and endangered species, fire, agriculture, pest management, environmental awareness, cultural resources, and land use planning

**TABLE 1-1**  
List of Relevant Planning Documents and Guidance

<b>Reference Document</b>	<b>Resource</b>	<b>Management Recommendations</b>
Storm Water Pollution Prevention Plan	Surface Water and Wetlands, Utilities & Infrastructure	Site assessment, evaluation, and design development Construction Best Management Practices (BMPs) Industrial BMPs Drainage area BMPs Inspection, sampling, and analysis Permit requirements, record keeping, and reporting
Storm Water Permit	Surface Water and Wetlands, Utilities & Infrastructure	Follow BMPs so the project will fall under the General Stormwater permits for construction and for operation, if required.
Disturbed Area Landscape Replacement Plan	Surface Water, Earth Resources	Identification of reusable landscape (trees, shrubs, etc.) Determine revegetation species
Hazardous Waste/Materials Management Plan	Hazardous and Toxic Substances	Management and storage of hazardous waste Recommendations for waste minimization
Spill Prevention Control, Countermeasure, and Spill Contingency Plan	Hazardous and Toxic Substances	Determine if a SPCC Plan is required, If so, follow the recommendations below. Describes procedures for spill prevention and response Containment and diversion to keep spills from reaching surface or ground water Construction and secondary containment of above ground and underground storage tanks Construction of piping used to carry potentially hazardous liquids Procedures for loading, unloading, and transporting potentially hazardous substances in vehicles Guidelines for recordkeeping, inspection, training, and security associated with potentially hazardous substances Spill response resources, capabilities, and procedures

TABLE 1-1  
List of Relevant Planning Documents and Guidance

Reference Document	Resource	Management Recommendations
Integrated Pest Management Plan	Hazardous and Toxic Substances	Use, storage, and disposal of herbicides and pesticides
Integrated Solid Waste Management Plan	Hazardous and Toxic Substances	Management guidelines for recycling and solid waste disposal
Health and Safety Plans	Human Health and Safety	Individual plans to be created for each construction project to minimize and manage construction risks to health and safety.

**THIS PAGE INTENTIONALLY LEFT BLANK**

## 2.0 Alternatives Including the Proposed Action

---

### 2.1 Introduction

2.1.0.1 The following alternatives were considered in this EA:

- **Proposed Action Alternative:** Development of approximately 6.5 acres of Air Force-owned property south of the intersection of Wardleigh Road and F Avenue along the east side of F Avenue. Development would include construction of a new office building for Air Force use.
- **Alternative A:** Relocate the Security Forces Squadron to an area within the base boundary and included in the Enhanced-Use-Lease area.
- **Alternative B:** Development of approximately 6.5 acres of Air Force-owned property on the north side of Wardleigh Road between H Street and F Avenue. Development would include construction of a new office building for Air Force use.
- **No-Action Alternative:** Relocation of components of the Security Forces Squadron where space is available in existing structures throughout the base.

### 2.2 Alternative Selection Criteria

2.2.0.1 Potential alternatives for meeting the needs of providing modern, efficient, and appropriately sized facilities for the Hill AFB workforce were screened using the following selection criteria:

- Meet Hill AFB's mission of supporting the operations of the OO-ALC and the 75th Air Base Wing (see Section 1.1) with no net loss in capability of installation lands to support the military mission
- Comply with Air Force and DoD planning and design manuals, design standards, and safety requirements for Air Force facilities
- Enhance the quality of life for Hill AFB personnel, contractors with the DoD, and private employees working within the development area
- Meet Antiterrorism/Force Protection (AT/FP) requirements
- Reduce current operation and maintenance costs
- Provide a central base location near the flight line in order to reduce response time, drive miles, and the volume of fuel used by vehicles during regular operations
- Construct the facility in an area with minimal relocation of environmental monitoring points

- Accomplish the facility construction in an efficient manner with a predictable completion date

2.2.0.2 The No-Action Alternative is carried forward for consideration in accordance with 40 CFR 1502.14(d).

## 2.3 Alternatives Considered But Eliminated from Detailed Analysis

### 2.3.1 Alternative A—Construct Security Forces Facility within Base Boundary on Enhanced-Use Lease Property

2.3.1.1 Alternative A would involve construction of the Security Forces facility within the Base boundary on WSD EUL property. At this time, there is not an unplanned, undeveloped parcel within the WSD EUL area that would accommodate the space needed for construction of the Security Forces Facility. In addition, construction of the Security Forces facility within the WSD EUL property would not allow the SFS to be centrally located on the base, which would not allow the SFS to achieve a reduction in fuel cost for vehicles. Under this alternative the construction schedule would not be determined by the Base. Construction would have to occur within the schedule for redevelopment activities in the WSD EUL area. Based on this rationale, this alternative was eliminated from detailed analysis.

## 2.4 Description of Alternatives Analyzed in Detail

### 2.4.1 No-Action Alternative

2.4.1.1 Principal Actions of the No-Action Alternative. Construction of a new Security Forces Facility would not occur. Demolition of Building 1219 would require relocation of the Security Forces Squadron to unoccupied facilities on-Base. It is unlikely that a facility large enough to contain all operations performed by the division would be available at one location; therefore, staff working in the division would have to be located at various places throughout the Base.

### 2.4.2 Proposed Action

2.4.2.1 The Proposed Action involves construction of a new 35,000-square-foot facility for the Security Forces Division. The new facility would be located on approximately 6.5 acres of land along the east side of F Avenue, southeast of Building 402 and the F Avenue and Wardleigh Road intersection. The new facility would be used for administrative and storage functions. The proposed site layout is indicated on Figure 1-2.

2.4.2.2 The new facility would provide a focal point at the Base for antiterrorism, resource protection, pass and registration, tactical deception, and security programs. The 75th SFS also maintains air base defense forces and military working dog teams for wartime and contingency deployments. The facility would contain an 800-square-foot armory for the storage of weapons and ammunition assigned to the SFS.



**2.4.2.3 Pre-Construction Activities.** Site preparation would include preconstruction asbestos surveys to determine if there are underground pipelines at the project site and whether they were insulated with asbestos-containing material.

**2.4.2.4 Schedule.** The schedule for development of the Proposed Action site is dependent on the WSD EUL project. After the schedule of demolition of Building 1219 has been finalized, a construction schedule can be established for the proposed facility. The new facility would need to be completed in time for employees currently working in Building 1219 to be relocated prior to the initiation of demolition activities.

**2.4.2.5 Antiterrorism/Force Protection.** Building setbacks would comply with the requirements identified in the Unified Facilities Criteria (UFC) 4-010-01, "DoD Minimum Antiterrorism Standards for Buildings," dated 8 October 2003, including the change dated 22 January 2007.

**2.4.2.6 Accessibility.** Common areas such as walks, parking, and common entrances to the facility would be designed and constructed such that they can be approached, entered, and used by physically handicapped people and comply with the Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities, Uniform Federal Accessibility Standards, and other applicable laws pertaining to accessibility.

**2.4.2.7 Potable Water/Fire Suppression.** The existing Base water supply tanks would provide the required storage for fire fighting, daily consumption, and irrigation. A water main would loop the building to provide required fire suppression flows at the required pressures.

**2.4.2.8 Sanitary Sewer.** Sanitary sewer lines would be constructed to allow the building to drain by gravity to the adjacent sewer main. The location and routing of the sewer main would be determined following verification of grade using least construction cost measures.

**2.4.2.9 Storm Drain.** Storm drains would be used to collect stormwater from various detention ponds, structures, and buildings. Inlet boxes, catch basins, sumps, roof drains, and connecting pipes would be incorporated into the final design of the facility.

**2.4.2.10 Stormwater** from the building, parking, and landscaped areas would not be detained on site. The stormwater system for this site would be connected to the Base stormwater system and detained in existing stormwater detention ponds.

**2.4.2.11 Electrical Power.** The power system is tentatively planned to be underground. The new building would have its own transformer and switch gear. A back-up diesel generator would be relocated onsite.

**2.4.2.12 Natural Gas.** The building would be connected to the existing Base natural gas distribution line.

**2.4.2.13 Hazardous Materials / Hazardous Waste.** Building 1219 contains one hazardous waste site, TJ05. This would be relocated into the proposed facility in a manner consistent with all applicable requirements regarding hazardous waste movement and storage. No additional hazardous waste sites would be created.

**2.4.2.14** If unusual odors or soil discoloration is observed during any excavation or trenching necessary to complete the Proposed Action, or if any monitoring points are encountered, remedial managers from the Hill AFB Environmental Restoration Division (75 CEG/CEV) would be notified. Samples from suspect soils on Hill AFB will be analyzed to determine whether they contained hazardous constituents. The suspect soils would be stored at sites operated in accordance with the requirements of 40 CFR 265 while analytical results were pending. Any soils determined to be hazardous would be eventually labeled, transported, treated, and disposed of in accordance with applicable federal and state regulations. Soil from the construction site would not be taken off the Base without prior 75 CEG/CEV approval.

**2.4.2.15 Landscaping.** Approximately 6.5 acres would require landscaping following construction. To the extent practicable, post construction landscaping would retain, reuse, or replace existing trees and shrubs. This is in compliance with the Hill AFB INRMP (Hill AFB, 2007a).

### **2.4.3 Alternative B—Construction of Security Forces Facility on North Side of Wardleigh Road**

**2.4.3.1** Alternative B would also involve construction of a new 35,000-square-foot facility for the Security Forces Division. The new facility, however, would be located on approximately 6.5 acres of land north of Wardleigh Road approximately midway between H Street and F Avenue. The new facility would be used for administrative and storage functions. The proposed site layout is indicated on Figure 1-2.

**2.4.3.2** The new facility would provide a focal point at the Base for antiterrorism, resource protection, pass and registration, tactical deception, and security programs. The 75th SFS also maintains air base defense forces and military working dog teams for wartime and contingency deployments. The facility would contain an 800-square-foot armory for the storage of weapons and ammunition assigned to the SFS.

**2.4.3.3 Pre-Construction Activities.** Site preparation would include preconstruction asbestos surveys to determine if there are underground pipelines at the project site and whether they were insulated with asbestos-containing material.

**2.4.3.4 Schedule.** The schedule for development of the Alternative B site is dependent on the WSD EUL project. After the schedule of demolition of Building 1219 has been finalized, a construction schedule can be established for the proposed facility. The new facility would need to be completed in time for employees currently working in Building 1219 to be relocated prior to the initiation of demolition activities.

**2.4.3.5 Antiterrorism/Force Protection.** Building setbacks would comply with the requirements identified in the Unified Facilities Criteria (UFC) 4-010-01, "DoD Minimum Antiterrorism Standards for Buildings," dated 8 October 2003, including the change dated 22 January 2007.

**2.4.3.6 Accessibility.** Common areas such as walks, parking, and common entrances to the facility would be designed and constructed such that they can be approached, entered, and used by physically handicapped people and comply with the Americans with Disabilities

Act Accessibility Guidelines for Buildings and Facilities, Uniform Federal Accessibility Standards, and other applicable laws pertaining to accessibility.

**2.4.3.7 Potable Water/Fire Suppression.** The existing Base water supply tanks would provide the required storage for fire fighting, daily consumption, and irrigation. A water main would loop the building to provide required fire suppression flows at the required pressures.

**2.4.3.8 Sanitary Sewer.** Sanitary sewer lines would be constructed to allow the building to drain by gravity to the adjacent sewer main. The location and routing of the sewer main would be determined following verification of grade using least construction cost measures.

**2.4.3.9 Storm Drain.** Storm drains would be used to collect stormwater from various detention ponds, structures, and buildings. Inlet boxes, catch basins, sumps, roof drains, and connecting pipes would be incorporated into the final design of the facility.

**2.4.3.10 Stormwater** from the building, parking, and landscaped areas would not be detained on site. The stormwater system for this site would be connected to the base stormwater system and detained in existing stormwater detention ponds.

**2.4.3.11 Electrical Power.** The power system is tentatively planned to be underground. The new building would have its own transformer and switch gear. A back-up diesel generator would be relocated onsite.

**2.4.3.12 Natural Gas.** The building would be connected to the existing natural gas distribution line at the Base.

**2.4.3.13 Hazardous Materials / Hazardous Waste.** Building 1219 contains one hazardous waste site, TJ05. This would be relocated into the proposed facility in a manner consistent with all applicable requirements regarding hazardous waste movement and storage. No additional hazardous waste sites would be created.

**2.4.3.14** If unusual odors or soil discoloration is observed during any excavation or trenching necessary to complete the Proposed Action, or if any monitoring points are encountered remedial managers from the Hill AFB Environmental Restoration Division (75 CEG/CEV) would be notified. Samples from suspect soils on Hill AFB will be analyzed for hazardous vs. non-hazardous determination. The suspect soils will be stored at sites operated in accordance with the requirements of 40 CFR 265 while analytical results are pending. Any soils determined to be hazardous would be eventually labeled, transported, treated, and disposed in accordance with federal and state regulations. Soil from the construction project may not be taken off base without prior 75 CEG/CEV approval.

**2.4.2.15 Landscaping.** Approximately 6.5 acres would require landscaping following construction. To the extent practicable, post construction landscaping would retain, reuse, or replace existing trees and shrubs. This is in compliance with the Hill AFB INRMP (Hill AFB, 2007a).

## 2.5 Summary Comparison of Alternatives

2.5.0.1 Table 2-1 presents a summary of the environmental impacts of each alternative based on the detailed analysis provided in Section 4.0 of this EA. Resource categories eliminated from detailed analysis are also included in this summary. The summary is a condensed set of findings. A description of impacts to relevant resource categories is provided in Section 4.0. Resource categories eliminated from detailed evaluation are described in Section 3.0.

2.5.0.2 As indicated on Table 2-1, the no action alternative has an adverse impact to air quality. The no-action alternative does not impact other resources.

2.5.0.3 Alternative B and the Proposed Action have identical impacts to all resource categories except airfield operations and environmental remediation project sites. Both alternatives have a minimal beneficial impact to airfield operations, while Alternative B also has a minimal adverse impact because use of the Alternative B area would render the space unusable by other organizations requiring proximal access to the flightline.

2.5.0.4 The Proposed Action would not impact environmental restoration program sites. Alternative B would have a minimal adverse impact based on the inability to accurately evaluate the groundwater plume that underlies the Alternative B site.

2.5.0.5 Minimal beneficial impacts are associated with the safety and occupational health, hazardous material and waste, and socioeconomic resource categories. Minimal adverse impacts are associated with noise, earth resources, surface water, wildlife and plants, and habitat. No impact is associated with groundwater, infrastructure/utilities, environmental restoration program sites, threatened and endangered species, migratory birds, wetlands, cultural resources, or environmental justice.

2.5.0.6 Both minimal adverse and minimal beneficial impacts are expected in relation to air quality.

## 2.6 Identification of the Preferred Alternative

2.6.0.1 The Proposed Action, construction of the new Security Forces Facility along the eastern side of F Avenue, is the preferred alternative.

TABLE 2-1  
Comparison Matrix of Environmental Impacts  
*Environmental Assessment for Construction of the Security Forces Facility*

Resource Category	Proposed Action	Alternative B	No Action
<b>Airfield Operations</b>	<b>Minimal Beneficial Impact</b>  Central location would result in reduced response times, lower fuel consumption and related fuel costs, and less mileage on vehicles.	<b>Minimal Beneficial Impact AND Minimal Adverse Impact</b>  Central location would result in reduced response times, lower fuel consumption and related fuel costs, and less mileage on vehicles.  Use of the Alternative B area would render the space unusable by other organizations requiring proximal access to the flightline.	<b>No Impact</b>
<b>Noise</b>	<b>Minimal Adverse Impact</b>  Construction-related noise—greatest impact would be to on-Base workers located adjacent to the Proposed Action site.	<b>Minimal Adverse Impact</b>  Construction-related noise—greatest impact would be to on-Base workers located adjacent to the Alternative B site.	<b>No Impact</b>
<b>Air Quality</b>	<b>Minimal Adverse Impact AND Minimal Beneficial Impact</b>  Construction-related fugitive dust and heavy equipment emissions would have a small adverse impact on local air quality during the construction period.  Fugitive vehicle emissions would decrease over existing levels because the SF Facility would be located closer to the flightline – thus reducing the distance travelled and resultant emissions.	<b>Minimal Adverse Impact AND Minimal Beneficial Impact</b>  Construction-related fugitive dust and heavy equipment emissions would have a small adverse impact on local air quality during the construction period.  Fugitive vehicle emissions would decrease over existing levels because the SF Facility would be located closer to the flightline – thus reducing the distance travelled and resultant emissions.	<b>Adverse Impact</b>  Distributing the SFS mission to buildings where space exists throughout the base would result in increased commuting between base locations. This would increase emissions.

TABLE 2-1  
Comparison Matrix of Environmental Impacts  
*Environmental Assessment for Construction of the Security Forces Facility*

Resource Category	Proposed Action	Alternative B	No Action
<b>Safety and Occupational Health</b>	<b>Minimal Beneficial Impact</b> New office building constructed to current standards would provide employees with a safer work environment.	<b>Minimal Beneficial Impact</b> New office building constructed to current standards would provide employees with a safer work environment.	<b>No Impact</b>
<b>Earth Resources</b>	<b>Minimal Adverse Impact</b> Increased erosion potential during the construction period	<b>Minimal Adverse Impact</b> Increased erosion potential during the construction period	<b>No Impact</b>
<b>Water Resources</b>			
Surface Water	<b>Minimal Adverse Impacts</b> Minor increase in volume of stormwater runoff after development	<b>Minimal Adverse Impacts</b> Minor increase in volume of stormwater runoff after development	<b>No Impact</b>
Groundwater	<b>No Impact</b> Surface construction activities would not impact groundwater aquifers.	<b>No Impact</b> Surface construction activities would not impact groundwater aquifers.	<b>No Impact</b>
<b>Infrastructure/Utilities</b>	<b>No Impact</b> Construction would require utility supply mains connecting to existing distribution systems on-Base	<b>No Impact</b> Construction would require utility supply mains connecting to existing distribution systems on-Base	<b>No Impact</b>
<b>Hazardous Materials and Wastes</b>	<b>Minimal Beneficial Impact</b> Asbestos, lead-based paint, and other hazardous substance surveys would be conducted prior to construction activities. Asbestos, lead-based paint, and other hazardous substances would be removed to appropriate disposal facilities prior earth moving at proposed site.	<b>Minimal Beneficial Impact</b> Asbestos, lead-based paint, and other hazardous substance surveys would be conducted prior to construction activities. Asbestos, lead-based paint, and other hazardous substances would be removed to appropriate disposal facilities prior earth moving at proposed site.	<b>No Impact</b>

TABLE 2-1  
Comparison Matrix of Environmental Impacts  
*Environmental Assessment for Construction of the Security Forces Facility*

Resource Category	Proposed Action	Alternative B	No Action
<b>Environmental Restoration Program Sites</b>	<b>No Impact</b>  Air Force-approved modification of monitoring points and/or treatment systems prior to site development would avoid impacts to remediation systems.	<b>Minimal Adverse Impact</b>  Air Force-approved modification of monitoring points and/or treatment systems prior to site development would reduce impacts to remediation systems. Relocation of Monitoring Point U9-014 would prevent accurate evaluation of the CTCL groundwater plume.	<b>No Impact</b>
<b>Natural Resources</b>			<b>No Impact</b>
Threatened and Endangered Species	<b>No Impact</b>  No federal or state listed species of wildlife or plant or any critical habitat is known to be present on the site.	<b>No Impact</b>  No federal or state listed species of wildlife or plant or any critical habitat is known to be present on the site.	
Wildlife and Plants	<b>Minimal Adverse Impact</b>  Wildlife near construction sites would likely be temporarily displaced by the combined effects of noise, people, and equipment. On construction sites, wildlife and plants would both be displaced, either temporarily or semi-permanently	<b>Minimal Adverse Impact</b>  Wildlife near construction sites would likely be temporarily displaced by the combined effects of noise, people, and equipment. On construction sites, wildlife and plants would both be displaced, either temporarily or semi-permanently	
Migratory Birds	<b>No Impact</b>  During the nesting season, required preconstruction surveys for the presence of federally protected migratory bird species coupled with the typically sparse vegetation should prevent the accidental taking of migratory birds.	<b>No Impact</b>  During the nesting season, required preconstruction surveys for the presence of federally protected migratory bird species coupled with the typically sparse vegetation should prevent the accidental taking of migratory birds.	

TABLE 2-1  
 Comparison Matrix of Environmental Impacts  
*Environmental Assessment for Construction of the Security Forces Facility*

Resource Category	Proposed Action	Alternative B	No Action
Habitat	<b>Minimal Adverse Impact</b> Existing habitat on the proposed site would be displaced by either structures or landscaping.	<b>Minimal Adverse Impact</b> Existing habitat on the proposed site would be displaced by either structures or landscaping.	
Wetlands	<b>No Impact</b> The site does not contain wetlands.	<b>No Impact</b> The site does not contain wetlands.	
<b>Cultural Resources</b>	<b>No Impact</b> There are no known cultural resources affected.	<b>No Impact</b> There are no known cultural resources affected.	<b>No Impact</b>
<b>Socioeconomic Resources</b>	<b>Minimal Beneficial Impact</b> The hiring of construction workers would create a temporary beneficial impact.	<b>Minimal Beneficial Impact</b> The hiring of construction workers would create a temporary beneficial impact.	<b>No Impact</b>
<b>Environmental Justice</b>	<b>No Impact</b> The proposed project has no issues involving environmental justice.	<b>No Impact</b> The proposed project has no issues involving environmental justice.	<b>No Impact</b>



## 3.0 Affected Environment and Environmental Consequences

---

**3.0.0.1** This section describes the relevant resources that would be affected by the alternatives if they were implemented. This section also describes relevant pre-existing factors that could affect project implementation and operation. Together with the description of the Proposed Action and No-Action Alternative in Section 2.0, and with the predicted consequences of the Proposed Action in Section 4.0, this section helps establish the scientific baselines against which the decision maker and the public can compare the effects of the alternatives.

**3.0.0.2** This section presents a discussion of the resources present at Hill AFB within the development area. This discussion focuses on the following areas:

- Airfield Operations
- Noise
- Air Quality
- Safety and Occupational Health
- Earth Resources
- Water Resources – Surface Water
- Infrastructure/Utilities
- Transportation
- Hazardous Materials and Waste
- Environmental Restoration Program Sites
- Cultural Resources
- Natural Resources
- Socioeconomic Resources
- Environmental Justice

### 3.1 Resource Categories Eliminated from Further Study

#### 3.1.1 Water Resources

**3.1.1.1 Surface Hydrology.** Natural surface drainage has been altered by historical development at Hill AFB. Much of the surface flow has been diverted to storm drains and drainage ditches and rerouted into storm drain ponds. Figure 3-1 shows the current surface water drainage patterns at Hill AFB.

**3.1.1.2** No permanent surface water features are within the site. Surface sheet flow either percolates into soil or leads to constructed ponds following storm events. Because no permanent surface water features exist at the site, surface water impacts would not occur under any of the alternatives. Therefore, this resource category has been eliminated from further study.

**3.1.1.3 Groundwater.** Three groundwater aquifers lie beneath Hill AFB. One is a shallow unconfined aquifer and two are deep confined aquifers, called the Sunset and Delta

aquifers. To date, the shallow groundwater aquifer beneath Hill AFB has not been formally classified under Utah Administrative Code R317-6, Groundwater Quality Protection. At sites under investigation and remediation by Hill AFB, regulated contaminant concentrations exceed groundwater quality standards. The shallow aquifer at these locations would be classified as Class III—Limited Use Groundwater. The Sunset and Delta aquifers are located approximately 500 to 1,000 feet below the ground surface at Hill AFB and are presently used as drinking water sources. Both of these deep aquifers are classified as Class IA—Pristine Groundwater. No contamination has been identified in either of the deeper aquifers (Loucks, 2007).

3.1.1.4 The depth to groundwater in the vicinity of the Proposed Action and Alternative B is estimated to be approximately 25 to 30 feet. Excavation within the site would not reach this depth. Because none of the alternatives would affect groundwater resources, this resource category has been eliminated from further study.

### 3.1.2 Transportation

3.1.2.1 The existing roadway network serving Hill AFB consists primarily of Wardleigh Road, which is oriented in an east-west direction near the Proposed Action and Alternative B, and several cross streets. Traffic in the vicinity of the Hill AFB access gates tends to be congested during early morning and mid-afternoon shift changes. No transportation impacts are anticipated in association with the Proposed Action, Alternative B, or the No Action Alternative, this resource category has been eliminated from further study.

### 3.1.3 Cultural Resources

3.1.3.1 No significant cultural resources have been identified in the Area of Potential Effect (APE) for the Proposed Action. Therefore, the Air Force has excluded cultural resources from detailed analysis. Alternative B is not the preferred alternative and was not included in the Section 106 consultation package submitted to the Utah State Historic Preservation Office (SHPO). In the event that Alternative B becomes the preferred alternative, the site would be subject to the Section 106 process, and effect would need to be determined for the proposed APE.

3.1.3.2 Three previous inventories conducted on Hill AFB in 1991, 1995, and 2001 (comprising 840 acres total), resulted in the survey of 12.5 percent of the total area of Hill AFB. Results from these projects included the recordation of one historic refuse dump and two prehistoric isolates, all determined ineligible for listing in the National Register of Historic Places. None of the previous inventories falls within the APE of the Proposed Action. Given the lack of previous findings and the extensive development and disturbance of Hill AFB, the potential for historic properties is extremely low. If any are found during construction, ground-disturbing activities in the immediate vicinity would cease, the Hill AFB Cultural Resources Program would be notified, and the unanticipated discovery of archaeological deposits procedures would be implemented with direction from the Hill AFB Cultural Resources Program and in accordance with the Hill AFB ICRMP (Hill AFB, 2007b). The Utah State Historic Preservation Office (SHPO) concurred with a finding of no adverse effect after reviewing the Proposed Action (Appendix A).

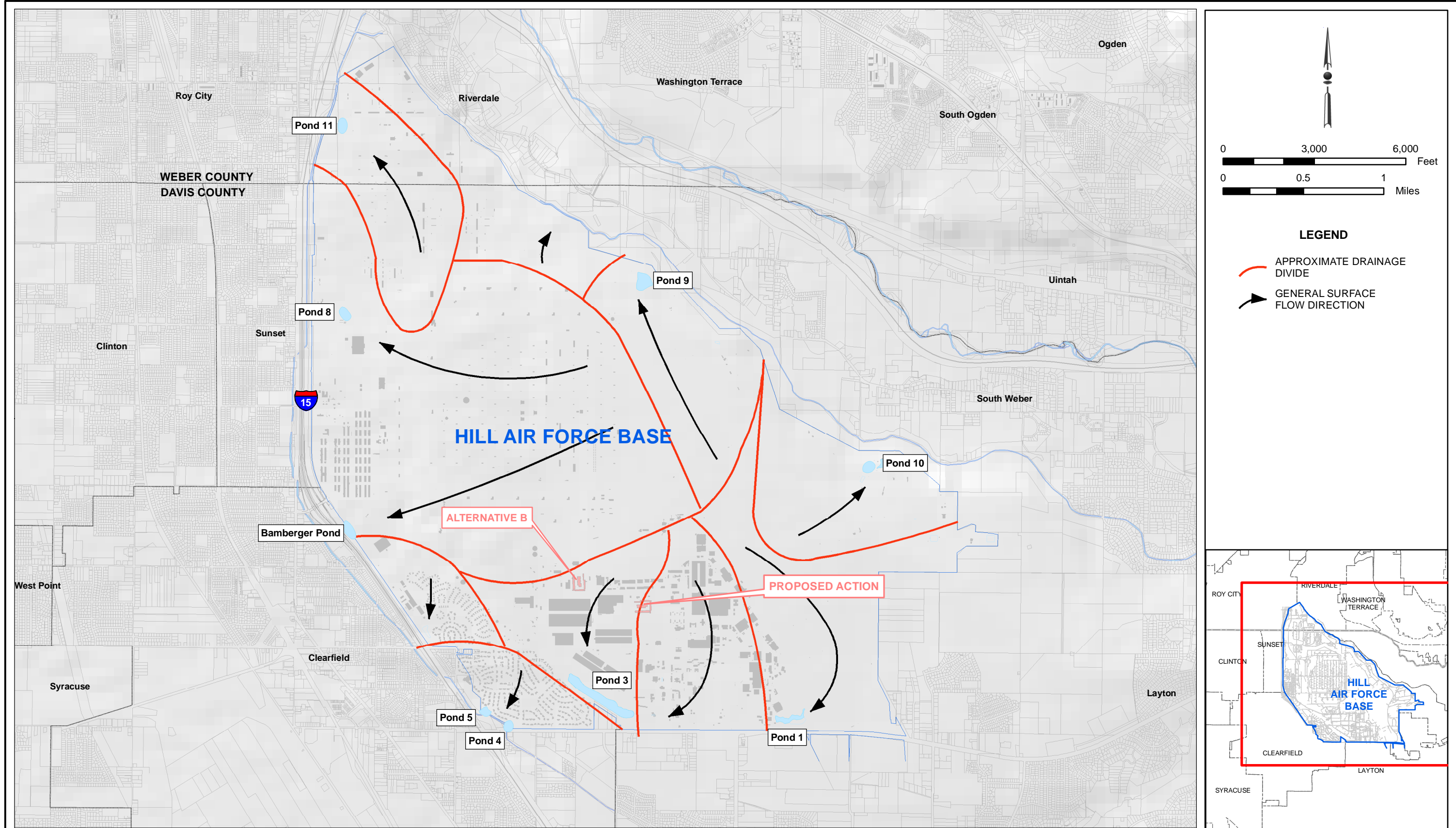


FIGURE 3-1  
SURFACE WATER DRAINAGE PATTERNS  
SECURITY FORCES FACILITY EA  
HILL AIR FORCE BASE, UTAH





3.1.3.3 Hill AFB has determined formal consultation with American Indian Tribes is not warranted given the absence of resources that may be reasonably construed as being of interest to them.

### 3.1.4 Natural Resources

3.1.4.1 **Wildlife and Plants.** No pristine habitat remains inside the Proposed Action or Alternative B sites. No critical plant or wildlife habitat exists inside the development area. Wildlife species occurring at Hill AFB are listed in Table 3-1.

TABLE 3-1  
Hill Air Force Base Wildlife Species  
*Environmental Assessment for Construction of the Security Forces Facility*

Common Name	Scientific Name	Common Name	Scientific Name
Turkey Vulture	<i>Cathartes aura</i>	Cedar Waxwing	<i>Bombycilla cedorum</i>
Sharp shinned Hawk	<i>Accipiter striatus</i>	European Starling	<i>Sturnus vulgaris</i>
Cooper's Hawk	<i>Accipiter cooperii</i>	Warbling Vireo	<i>Vireo gilvus</i>
Swainson's Hawk	<i>Buteo swainsoni</i>	Yellow Warbler	<i>Dendroica petechia</i>
Red-tailed Hawk	<i>Buteo jamaicensis</i>	Yellow-rumped Warbler	<i>Dendroica coronata</i>
American Kestrel	<i>Falco sparverius</i>	Wilson's Warbler	<i>Wilsonia pusilla</i>
Prairie Falcon	<i>Falco mexicanus</i>	Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>
Killdeer	<i>Charadrius vociferus</i>	Lazuli Bunting	<i>Passerina amoena</i>
California Gull	<i>Larus californicus</i>	Chipping Sparrow	<i>Spizella passerina</i>
Rock Dove	<i>Columba livia</i>	Brewer's Sparrow	<i>Spizella breweri</i>
Mourning Dove	<i>Zenaida macroura</i>	Lark Sparrow	<i>Chondestes grammacus</i>
Black-chinned Hummingbird	<i>Archilochus alexandri</i>	Lark Bunting	<i>Calamospiza melanocorys</i>
Broad-tailed Hummingbird	<i>Selasphorus platycercus</i>	Grasshopper Sparrow	<i>Ammodramus savannarum</i>
Rufous Hummingbird	<i>Selasphorus rufus</i>	Song Sparrow	<i>Melospiza melodia</i>
Lewis' Woodpecker	<i>Melanerpes lewis</i>	White crowned Sparrow	<i>Zonotrichia leucophrys</i>
Downy Woodpecker	<i>Picoides pubescens</i>	Dark-eyed Junco	<i>Junco hyemalis</i>
Northern Flicker	<i>Colaptes auratus</i>	Western Meadowlark	<i>Sturnella neglecta</i>
Western Kingbird	<i>Tyrannus verticalis</i>	Brewer's Blackbird	<i>Euphagus cyanocephalus</i>
Horned Lark	<i>Eremophila alpestris</i>	Brown-headed Cowbird	<i>Molothrus ater</i>
Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	Bullock's Oriole	<i>Icterus bullockii</i>
Barn Swallow	<i>Hirundo rustica</i>	House Finch	<i>Carpodacus mexicanus</i>
Western Scrub-Jay	<i>Aphelocoma californica</i>	American Goldfinch	<i>Carduelis tristis</i>
Black-billed Magpie	<i>Pica hudsonia</i>	House Sparrow	<i>Passer domesticus</i>

TABLE 3-1

Hill Air Force Base Wildlife Species

*Environmental Assessment for Construction of the Security Forces Facility*

Common Name	Scientific Name	Common Name	Scientific Name
Common Raven	<i>Corvus corax</i>	Mule deer	<i>Odocoileus hemionus</i>
Black-capped Chickadee	<i>Poecile atricapillus</i>	Pocket gopher	<i>Geomyidae</i>
Mountain Chickadee	<i>Poecile gambeli</i>	Red fox	<i>Vulpes vulpes</i>
Rock Wren	<i>Salpinctes obsoletus</i>	Skunk	<i>Mephitidae</i>
Blue-gray Gnatcatcher	<i>Poliophtila caerulea</i>	Raccoon	<i>Procyon lotor</i>
American Robin	<i>Turdus migratorius</i>		

**NOTE :** No federal or state-listed wildlife or critical habitat are found on-Base.

**3.1.4.2 Migratory Birds.** Most migratory bird species are protected under federal law. The application to the Proposed Action is that no site disturbance can be made during nesting season unless it has been determined that no active nests (no eggs or baby birds) of migratory bird species would be impacted. Migratory bird species could potentially be nesting in the Proposed Action or Alternative B sites from the first of March through the end of June. No indication of nesting has been observed at the site in the past.

**3.1.4.3 Threatened and Endangered Species.** As part of the Air Force's obligation to identify and manage natural resources, comprehensive species inventories have been conducted on Hill AFB. No resident threatened or endangered species or state species of concern have been found in the redevelopment area. Based on information obtained from the Utah Natural Heritage Program, the only federally listed species believed to have a potential presence within 10 miles of Hill AFB include the bald eagle (*Haliaeetus leucocephalus*), desert tortoise (*Gopherus agassizii*), June sucker (*Chasmistes liorus*), and Ute ladies' tresses (*Spiranthes diluvialis*). None of these species has been found to reside on Hill AFB (Blood, 2007).

**3.1.4.4** In addition, according to data provided by the Utah Division of Wildlife Resources, state-listed threatened or endangered species occurring or possibly occurring in Davis County include the yellow-billed cuckoo (*Coccyzus americanus*), razorback sucker (*Xyrauchen texanus*), California condor (*Gymnogyps californianus*), Mexican spotted owl (*Strix occidentalis lucida*), southwestern willow flycatcher (*Empidonax traillii extimus*), and Utah prairie dog (*Cynomys parvidens*). None of these species has been found to reside on Hill AFB. No critical or important habitat exists in the development area (Blood, 2007).

**3.1.4.5 Wetlands.** Wetlands sometimes are created at temporary storage reservoirs for stormwater runoff. Wetlands promote species diversity on Hill AFB. Wetlands on Hill AFB do not meet the definition of "waters of the United States," and are not subject to Army Corps of Engineers jurisdiction and permitting requirements under Section 404 of the CWA. Furthermore, no wetlands are present on the project site. Because Hill AFB's wetlands are constructed ponds, rather than natural ponds, they are also not covered under Executive Order 11990, Protection of Wetlands.

**3.1.4.6 Floodplains.** Hill AFB and the adjacent cities are classified by the Federal Emergency Management Agency as Zone X areas outside the 500-year flood zone.

### **3.1.5 Socioeconomic Resources**

**3.1.5.1** Presently, the Hill AFB workforce comprises approximately 23,000 civilian, military, and contractor personnel. Civilians comprise more than 50 percent of the personnel at the Base. The workforce at Hill AFB is drawn from various locations throughout northern Utah (Fisher, 2006).

**3.1.5.2** Communities in areas near the proposed development have experienced substantial residential growth during recent years. Information contained on the EPA EnviroMapper Web site indicates the percent minority rate varies from zero to 10 percent to 40 to 100 percent throughout the surrounding area. However, it appears that the percent minority is typically 20 to 30 percent in the immediate vicinity of Hill AFB. The percent of the population living below poverty is zero to 10 percent. Unemployment rates in the surrounding area are less than the national average and similar to the state average (EPA, 2008).

**3.1.5.3** The No-Action Alternative, Proposed Action Alternative, and Alternative A would not impact the existing socioeconomic setting in the vicinity of the base. Therefore, this resource has been eliminated from further study.

### **3.1.6 Environmental Justice**

**3.1.6.1** No minority low income populations are located in the vicinity of the Base, and the Base population is not demographically different from the surrounding community. There are no schools or residences located within the development area.

## **3.2 Description of Relevant Affected Resources**

### **3.2.1 Airfield Operations**

**3.2.1.1** Airfield-criteria height restrictions for structures surrounding the runway limit structure heights to 150 to 500 feet above the runway elevation (4,789 feet above mean sea level [amsl]), depending on the distance from the runway. The allowable height elevation near the runway would be 4,939 feet amsl. The ground surface high point of the Proposed Action and Alternative B sites is approximately 4,760 feet amsl, which would allow building heights up to 179 feet.

**3.2.1.2** Fluctuating fuel prices affect budgets associated with airfield operation support. The cost to heat buildings and run automobiles is increasing. These increases force organizations to either cut other items from their budgets or find additional funds.

### **3.2.2 Noise**

**3.2.2.1** The airfield on Hill AFB is located approximately 5,000 feet to the east of the development area. Engine noise from the testing and flight of aircraft is present throughout the day though it is not persistent. In a typical year, more than 50,000 takeoffs and landings

will be logged by locally based and transient aircraft (Hill AFB, 2003a). Airfield traffic predominantly occurs during daylight hours.

**3.2.2.2** Noise contours have been modeled for aircraft operations to identify incompatibility for noise-sensitive functions on the Base. Maximum mission noise contours have been mapped for this purpose. The development area is located within the 75-decibel (dB) noise contour.

**3.2.2.3** Modifications of these noise contours may occur in the next few years based on new workload and aircraft at Hill AFB. Noise studies for the new aircraft have not been completed at this time.

**3.2.2.4** The Air Force Air Installation Compatible Use Zone (AICUZ) program attempts to minimize incompatible development adjacent to military airfields. Air Force Air Installation Compatible Use Zone land use recommendations are based on aircraft noise and safety considerations. The Proposed Action and Alternative B are compatible land uses for these locations. Figure 3-2 shows airfield noise contours (Day-Night Average Sound Level [DNL]) in relation to the Proposed Action and Alternative B sites.

**3.2.2.5** With regard to construction-related noise, sensitive noise receptors (residential neighborhoods) are located 3,500 feet to the southwest. The residential neighborhoods are located at a lower elevation than the Proposed Action or Alternative B sites.

### **3.2.3 Air Quality**

**3.2.3.1** Air quality in the vicinity of Hill AFB (Davis and Weber Counties) is affected by vehicular, refinery, Davis County Burn Plant, aircraft, and other on- and off-Base industrial emissions. Hill AFB is located in Davis and Weber Counties, both of which are in attainment for all current NAAQS. These standards regulate six common pollutants: carbon monoxide, lead, nitrogen oxides, sulfur oxides, ozone, and particulate matter. In the early 1990s Davis County failed to attain the NAAQS of ozone, but in 1997 the county was redesignated as an ozone attainment area subject to the area maintenance requirements of Utah's State Implementation Plan (SIP).

**3.2.3.2** In 2006 the 24-hour standard for PM<sub>2.5</sub> was revised. This revision would classify Davis County and parts of Weber County as nonattainment, although official designations have yet to be made.

### **3.2.4 Safety and Occupational Health**

**3.2.4.1** On-Base safety is managed by the Hill AFB Safety Office (75 ABW/SE). This office works to prevent occupational environmental illness for all civilian and government employees on Base.

**3.2.4.2** Building 1219 was constructed during World War II with an intended use as small warehouse. Currently, the structure provides office and warehouse space for program and supply chain management and warfighter support activities. The structure has been extensively modified and has reached a point where it can no longer be cost-effectively maintained.



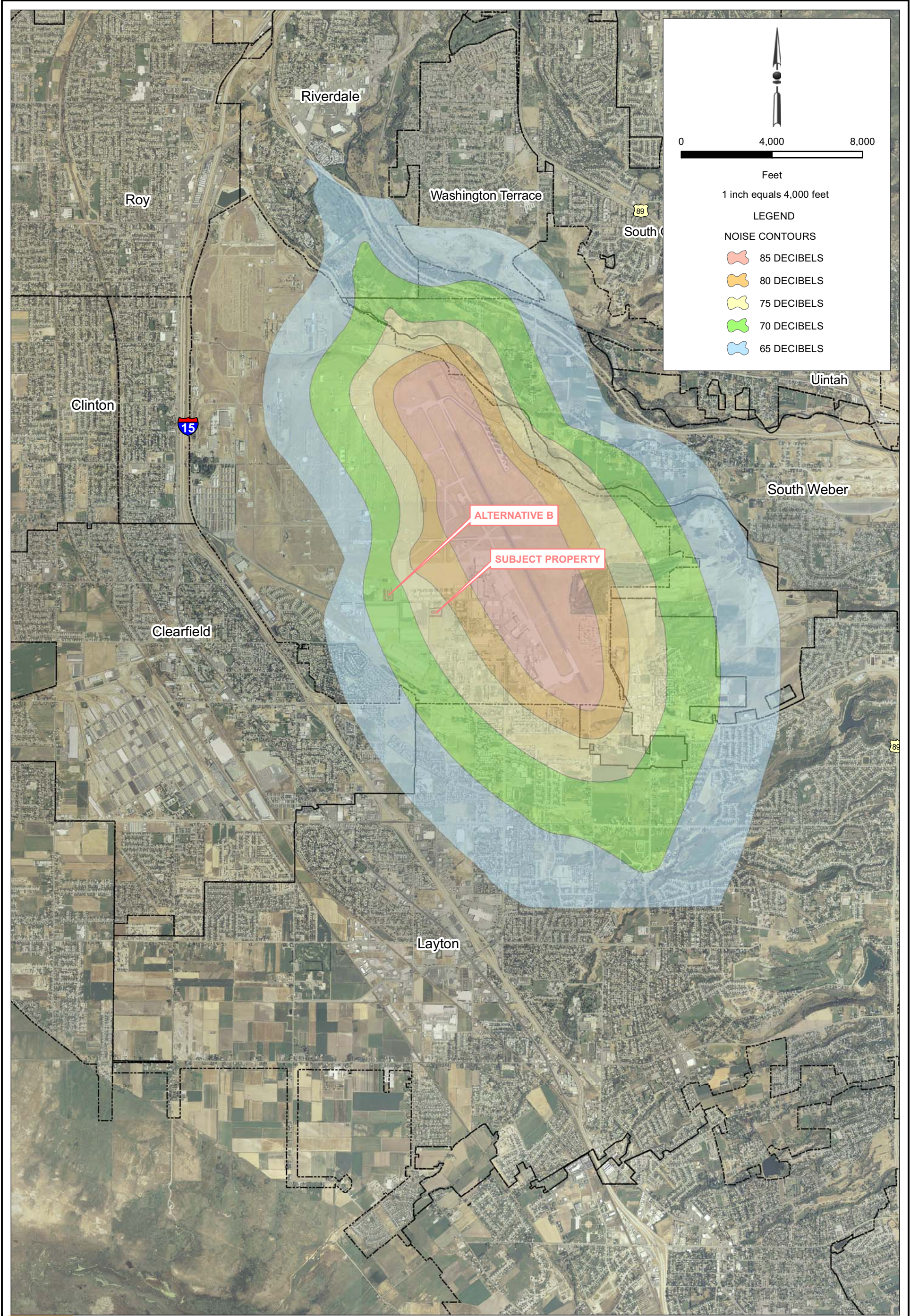


FIGURE 3-2  
**AICUZ NOISE CONTOURS**  
SECURITY FORCES FACILITY EA  
HILL AIR FORCE BASE, UTAH





**3.2.4.3** The cost to conduct deferred maintenance or bring the facility into compliance with existing regulations and meet Air Force mission requirements would exceed the cost of facility replacement. The heating, venting, and air conditioning (HVAC) units installed in the current facility are unreliable, and employees have had internal air quality complaints. In addition, Building 1219 does not conform to AT/FP requirements because the facility was constructed many years before the current standards existed.

**3.2.4.4** On-base occupational health is managed by the 75th Medical Group. This function is not currently performed within Building 1219, nor would it be relocated to the proposed site.

## **3.2.5 Earth Resources**

**3.2.5.1** Both the Proposed Action and Alternative B sites are currently vacant and contain no surface structures. Structures have existed in the past. The ground surface within the Proposed Action site is currently void of pavement or other hard surfaces. The Alternative B site is covered with either concrete or asphalt.

## **3.2.6 Infrastructure and Utilities**

**3.2.6.1** Existing utility infrastructure in the vicinity of the Proposed Action and Alternative B sites includes potable water distribution, stormwater control structures, sanitary sewers, industrial sewers, steam lines, gas lines, and power lines. Utility corridors in the vicinity of the Proposed Action site are located north of the site along Wardleigh Road and west of the site in F Avenue. The same Wardleigh Road utility corridors would provide service to the Alternative B site.

## **3.2.7 Hazardous Material and Waste**

**3.2.7.1** The Air Force has established programs to control the purchase, storage, and use of hazardous materials on Air Force installations to minimize the risks and costly cleanup associated with spills and to minimize the volume of hazardous waste generated. Hazardous materials are managed according to AFI 32-7086 (Secretary of the Air Force, 2004) and the 2006 Hill AFB supplements (Hill AFB, 2006). The generation of hazardous waste inside the Base boundary is managed according to the Hill AFB Hazardous Waste Management Plan.

## **3.2.8 Environmental Restoration Program Sites**

**3.2.8.1** Hill AFB is included on the EPA's National Priorities List and has several Environmental Restoration Program (ERP) cleanup sites. The EPA refers to these sites as Operable Units (OUs), and all of them are undergoing investigation, remediation, or monitoring. Operable Unit sites include landfills, spill areas, waste disposal sites, drum storage areas, underground storage tanks and piping, oil/water separators, waste treatment plants, and munitions disposal sites. Figure 3-3 indicates the location of monitoring points located in the vicinity of both the Proposed Action and Alternative B.

**3.2.8.2** The Alternative B location is within Installation Remediation Project (IRP) site (SS108), and a groundwater plume underlies the southeast corner of the Alternative B site. At least two monitoring points would need to be relocated or abandoned.

**THIS PAGE INTENTIONALLY LEFT BLANK**

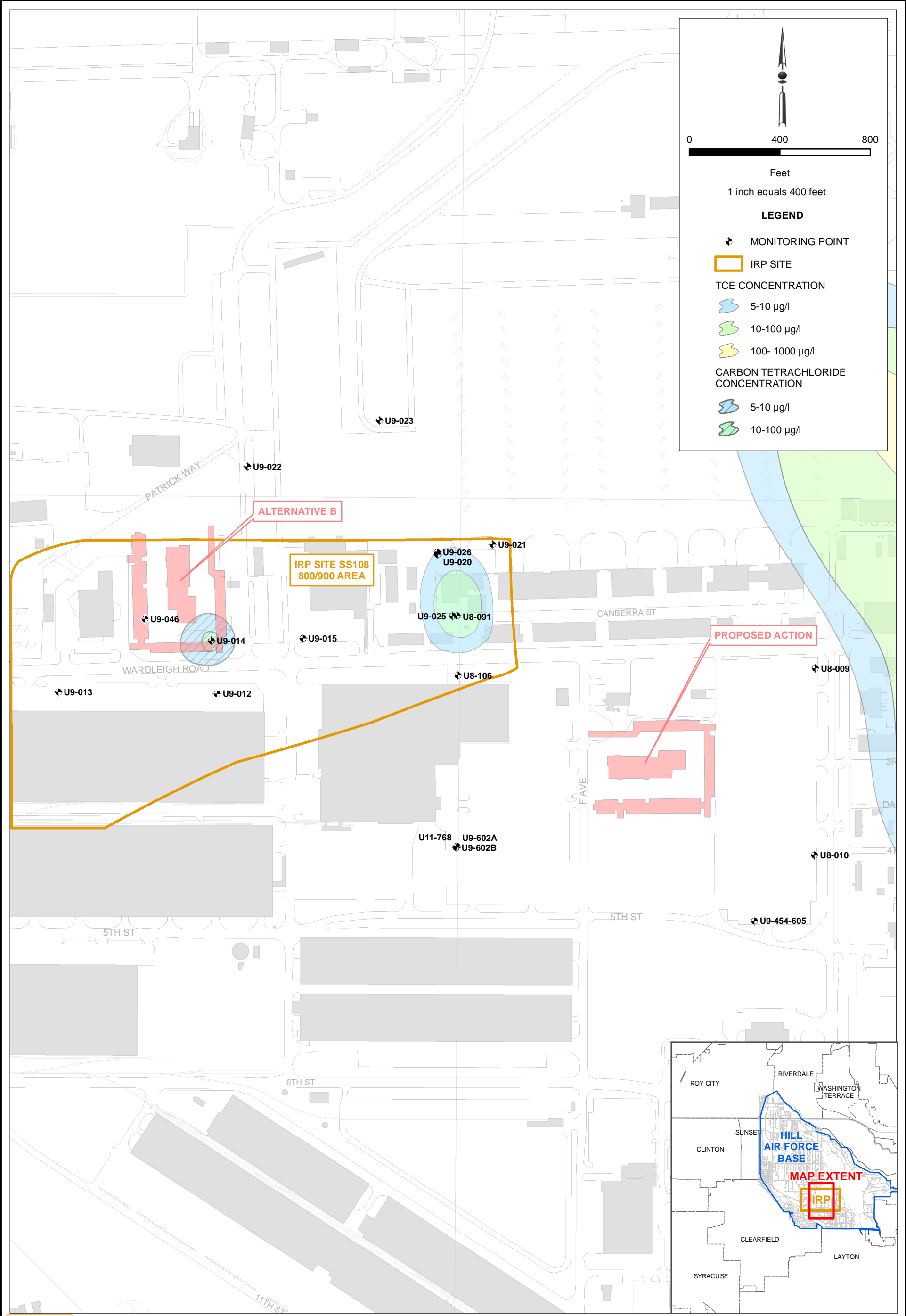


FIGURE 3-3  
ERP MONITORING POINTS  
SECURITY FORCES FACILITY EA  
HILL AIR FORCE BASE, UTAH



## 4.0 Environmental Consequences

---

4.0.0.1 This section presents the scientific and analytical basis for the conclusions summarized in comparative format in Table 2-1. This section presents details of the predicted beneficial and adverse impacts on the quality of the human environment.

### 4.1 Predicted Effects on Relevant Affected Resources of All Alternatives

4.1.0.1 For each relevant affected resource, this section describes the direct and indirect impacts of the No-Action and Proposed Action Alternatives.

#### 4.1.1 Noise

4.1.1.1 **No-Action Alternative.** Under the No-Action Alternative, there would be no noise-associated impact.

4.1.1.2 **Proposed Action and Alternative B.** Project-related noise exposure changes would likely result from construction activities under the Proposed Action. After construction, minimal on-Base noise levels are anticipated during use or operation.

4.1.1.3 The EPA Office of Noise Abatement and Control and the Empire State Electric Energy Research Company have extensively studied noise from individual pieces of construction equipment and different types of construction sites (EPA, 1971; Barnes et al., 1977). Use of these criteria for assessing noise is conservative because since these studies were conducted, public concerns about the adverse effects of noise have resulted in the inclusion of noise controls in construction equipment design.

4.1.1.4 Table 4-1 lists the expected noise levels 50 feet from the site during construction, according to the types of construction activities that might occur during construction. The table includes the construction equipment with the potential to result in the greatest noise levels during each phase of construction. Table 4-1 also lists the long-term composite average or equivalent site noise level (which represents noise from all equipment). The composite levels are lower than the individual levels because the loudest pieces of equipment would not be operating continuously throughout the construction phase. Noise levels reported at 50 feet from the site are the expected real-time noise levels, whereas the composite site noise levels are averaged over the work day.

TABLE 4-1

Typical Construction Equipment and Composite Site Noise Levels  
*Environmental Assessment for Construction of the Security Forces Facility*

Construction Phase	Loudest Construction Equipment	Equipment Noise Level (dB) at 50 feet	Composite Site Noise Level (dB) at 50 feet
Site Preparation and Excavation	Dump Truck	91	89
	Backhoe	85	
Concrete Pouring	Truck	91	85
	Concrete Mixer	85	
Steel Erection	Derrick Crane	88	89
	Jackhammer	88	
Mechanical	Derrick Crane	88	84
	Pneumatic Tools	86	
Cleanup	Rock Drill	98	79
	Truck	91	

**NOTES:**

Sources: EPA, 1971; Barnes et al., 1977

dB = Decibel

4.1.1.5 Noise dissipates by atmospheric attenuation as it travels through the air. Other factors that can affect the amount of attenuation are ground surface, foliage, topography, and humidity. Each time the distance from a noise source doubles, the level can be expected to decrease by a factor of four, which is equivalent to approximately 6 dB. The nearest sensitive noise receptors are residential neighborhoods located 3,500 feet southwest of the Proposed Action or Alternative B sites. At this distance, noise levels during construction would be similar to a typical daytime residential setting.

4.1.1.6 Based on these factors, minimal adverse noise impacts are expected in relation to the Proposed Action.

## 4.1.2 Air Quality

4.1.2.1 **No-Action Alternative.** Emissions from current operations and maintenance activities would not likely increase from current conditions because there would be no increase in Base personnel. Therefore, the No-Action Alternative does not impact air quality.

4.1.2.2 **Proposed Action and Alternative B.** Construction activities would temporarily increase fugitive emissions of particulate matter less than 10 micrometers in aerodynamic diameter (PM<sub>10</sub>) and PM<sub>2.5</sub>. Standard methods such as spraying disturbed soil surfaces with water to mitigate fugitive emissions will be implemented and are expected to keep PM<sub>10</sub> and PM<sub>2.5</sub> levels far below the NAAQS. The *Hill AFB Main Base Fugitive Dust Control Plan* (Hill AFB, 2003b) is applicable to both the Proposed Action and Alternative B sites.



4.1.2.3 Federal agencies planning to undertake actions in communities subject to CAA SIPs must first demonstrate that the Proposed Action will be in conformity with the state plan. The conformity threshold emission level for ozone in maintenance areas is 100 tons per year for nitrogen oxide (NO<sub>x</sub>) and volatile organic compounds (VOCs), the two pollutants that contribute to the formation of ozone. Likewise, the conformity threshold emission level for PM<sub>2.5</sub> in nonattainment areas is 100 tons per year.

4.1.2.4 Based on emission factors for construction vehicles provided by South Coast Air Quality Management District, emissions of NO<sub>x</sub> will be well below the threshold emission level.

4.1.2.5 Because the Utah Division of Air Quality has recommended that Davis County and portions of Weber County be designated as nonattainment for PM<sub>2.5</sub>, PM<sub>2.5</sub> must be evaluated. Based on emissions calculated using the EPA's AP-42 Table 13.2.3-1, PM<sub>2.5</sub> emissions will be less than 100 tons per year. Emissions were estimated assuming water would be applied frequently during all construction-related activities to suppress dust. In addition, emissions from Air Force equipment being relocated as part of the Proposed Action are addressed by the Base Title V Operating Permit and therefore are not included in calculations related to the conformity rule. Therefore, a conformity analysis for construction activities is not required.

4.1.2.6 The Base Title V Operation Permit would not be affected by the Proposed Action. Any equipment that would be removed or relocated, such as the emergency generator, as a result of the Proposed Action would need to be modified with an Approval Order prior to initiation of the action (Palmer, 2007).

4.1.2.7 Short-term adverse impacts on air quality are expected as a result of construction emissions. Short-term fugitive emissions including VOCs, carbon monoxide (CO), NO<sub>x</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, hazardous air pollutants, and sulfur oxide (SO<sub>x</sub>) could result from internal combustion engines and heavy equipment used at the renovation site. Project construction emissions for the entire project were calculated based on AP-42 procedures for heavy construction in Section 13.2.3. The construction emissions would be spread over 3 years. The maximum calculated emissions in tons per year (tpy) are shown in Table 4-2.

TABLE 4-2

Maximum Calculated Emissions

*Environmental Assessment for Construction of the Security Forces Facility*

<b>Pollutant</b>	<b>Site Preparation</b>	<b>Construction</b>	<b>Mobile Construction Vehicles*</b>	<b>Total Construction Emissions</b>
NO <sub>x</sub> (tpy)	—	—	5.93	<b>5.93</b>
CO (tpy)	—	—	3.79	<b>3.79</b>
SO <sub>x</sub> (tpy)	—	—	0.01	<b>0.01</b>
VOC (tpy)	—	—	0.69	<b>0.69</b>
TSP (tpy)	0.67	2.06	0.19	<b>2.92</b>
PM <sub>10</sub> (tpy)	0.36	0.22	0.19	<b>0.77</b>
PM <sub>2.5</sub> (tpy)	0.17	0.02	0.19	<b>0.38</b>

**NOTES:**

tpy = tons per year

TSP = Total Suspended Particulate

\* Includes vehicular emissions from construction workers commuting to the site

4.1.2.8 The magnitude of these short-term (i.e., construction-related) emissions would be minimal. Construction-related impacts for particulate emissions are expected to be local (i.e., confined to the construction site area because they settle out) and limited to the duration of the construction activities, and, therefore, adverse impacts to air quality would be minimal. These calculations demonstrate that construction emissions would not have a significant impact on air quality.

### 4.1.3 Safety and Occupational Health

4.1.3.1 **No-Action Alternative.** Implementing the No-Action Alternative would not change existing health or safety conditions. Since Building 1219 is scheduled for demolition, the 75th SFS would be relocated to other available office space. This other office space would most likely be substandard and would not conform to AT/FP requirements because most Base facilities were constructed many years before implementation of the current standards. Therefore, adverse impacts to safety and occupational health of personnel working within the development area could occur under the No-Action Alternative.

4.1.3.2 **Proposed Action and Alternative B.** Construction areas would be secured as necessary to prevent unauthorized personnel from entering the work sites or excavations. The Proposed Action and Alternative B would incorporate AT/FP requirements. Therefore, a beneficial impact would be realized. Asbestos and lead-based paint abatements performed prior to construction activities would prevent worker exposure to these materials.

4.1.3.3 Relocation of the SF Facility would incorporate all Occupational Safety and Health Act (OSHA) standards. These standards would also be followed during operation of the facility.

## 4.1.4 Earth Resources

**4.1.4.1 No-Action Alternative.** No impacts to earth resources would be generated by the No-Action Alternative.

**4.1.4.2 Proposed Action and Alternative B.** No important soil resources are present in the Proposed Action and Alternative B sites. Construction would disturb surface soils and new construction would cover the soil surface.

**4.1.4.3** Construction activities could leave small areas of soil exposed, disturbed, and susceptible to wind erosion. The small areas of soil left temporarily exposed after construction would be stabilized to prevent wind and water erosion, thus creating minimal impact.

**4.1.4.4** Best management practices would be detailed in the Construction Stormwater Pollution Prevention Plan developed for the Utah General Stormwater Permit for construction sites that would keep soil from leaving the site and entering surface water, thus resulting in minimal impact.

## 4.1.5 Infrastructure and Utilities

**4.1.5.1 No-Action Alternative.** The No-Action Alternative would require relocation of components of the Security Forces Squadron throughout the base. This relocation effort may require building renovations and associated renovations to the infrastructure and utility systems of Hill AFB.

**4.1.5.2 Proposed Action and Alternative B.** Before clearing, excavation, or other construction activities, an Air Force Form 103, Base Civil Engineer Work Clearance Request, must be completed.

**4.1.5.3 Wastewater.** Any Industrial Wastewater Treatment Plant (IWTP) connections, which are currently located in Building 1219, would be relocated to the new facility. No increase in IWTP connections is expected relating to the Proposed Action.

**4.1.5.4** The sanitary sewer line that leaves the Base is connected to the North Davis Sewer District Wastewater Treatment Facility. The line that serves Hill AFB has about 900-gallons-per-minute capacity, based on historical flows and an inspection of the capacities in the lines provided by the District. A flow of 900 gallons per minute equates to 1.3 million gallons per day, which is more than the total expected sewer flow associated with the Proposed Action added to the existing Hill AFB flow.

**4.1.5.5 Potable Water/Fire Suppression.** Connections to water distribution lines would be made along the Proposed Action or Alternative B site boundaries. Existing water tanks would provide an adequate quantity of potable water and fire suppression. Proper back flow devices must be used on the fire suppression system.

**4.1.5.6 Stormwater.** Storm drains would be adequately sized for the amount of stormwater runoff that would be generated from impervious and landscape surfaces included in the Proposed Action or Alternative B sites. Increased flow rates would be controlled with appropriate structural BMPs and nonstructural BMPs so that the erosion potential would be eliminated or reduced to an acceptable level. Stormwater collection systems within the

Proposed Action or Alternative B sites would connect to stormwater control structures that currently exist at the Base boundary. These appropriate stormwater controls would help prevent stormwater of unacceptable quality from entering the off-Base storm drain systems. The release rate from the stormwater collection systems within the Proposed Action or Alternative B sites to the base system would be less than 0.02 ft/sec to avoid additional stress to the base collection system.

**4.1.5.7 Transportation/Traffic.** Minimal traffic delays and/or detours are anticipated during utility tie-ins. No permanent changes to traffic routes would occur as a result of the Proposed Action.

**4.1.5.8** Based on these factors, no infrastructure or utility impacts are expected in relation to the Proposed Action or Alternative B.

#### **4.1.6 Hazardous Materials and Waste**

**4.1.6.1 No-Action Alternative.** Implementation of the No-Action Alternative would not result in changes to current management of hazardous materials and waste. Hazardous waste site TJ05 is currently in Building 1219. Under the no-action alternative, TJ05 would be relocated along with the work process that requires this site. Prior to this site being moved, the Hazardous Waste Control Facility should be contacted to provide the new location.

**4.1.6.2 Proposed Action and Alternative B.** Historic use of hazardous materials at the Proposed Action and Alternative B sites is unknown. If found, subsurface lead-based paint and asbestos-containing materials would be mitigated prior to construction activities. These materials would be properly removed and disposed of, limiting the potential for exposure of future workers. Pesticide-containing soil found during construction activities would be managed by the Environmental Management Division.

**4.1.6.3** If unusual odors or soil discoloration is observed during any excavation or trenching necessary to complete the Proposed Action, or if any monitoring points are encountered, remedial managers from the Hill AFB Environmental Restoration Division (75 CEG/CEV) would be notified. Samples from suspect soils on Hill AFB will be analyzed to determine whether they contained hazardous constituents. The suspect soils would be stored at sites operated in accordance with the requirements of 40 CFR 265 while analytical results were pending. Any soils determined to be hazardous would be eventually labeled, transported, treated, and disposed of in accordance with applicable federal and state regulations. Soil from the construction site would not be taken off the Base without prior 75 CEG/CEV approval.

**4.1.6.4** Hazardous waste site TJ05 is currently in Building 1219. Under both the Proposed Action and Alternative B, TJ05 would be relocated along with the work process that requires this site. Prior to this site being moved, the Hazardous Waste Control Facility should be contacted to provide the new location.

**4.1.6.5** Based on these factors a minor beneficial impact is expected in relation to the Proposed Action.

## 4.1.7 Environmental Restoration Program Sites

**4.1.7.1 No-Action Alternative.** Implementation of the No-Action Alternative would not result in changes to current monitoring points for IRP Sites or Operable Units. Therefore, no impact is expected in relation to the No-Action Alternative.

**4.1.7.2 Proposed Action and Alternative B.** Implementation of the Proposed Action Alternative would not result in changes to current monitoring points for IRP Sites or Operable Units because there are no monitoring points within the Proposed Action site boundary. Therefore, no impact is expected in relation to the Proposed Action Alternative.

**4.1.7.3 Coordination with the Environmental Management Division-**approved modification of monitoring points and/or treatment systems prior to Alternative B site development would reduce impacts to remediation systems. Relocation of monitoring point U9-014 would prevent accurate evaluation of the groundwater plume underlying the Alternative B site. Therefore, a minimal adverse impact is expected in relation to Alternative B.

## 4.2 Cumulative Impacts

**4.2.0.1** Cumulative impacts are defined by the Council on Environmental Quality in 40 CFR 1508.7 as “impacts on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions.”

**4.2.0.2** Projects scheduled to occur in the vicinity of the Proposed Action and Alternative B include the construction of the Child Development Center, which would be located approximately 0.5 mile south of the Proposed Action location (0.75 mile southeast of Alternative B), and a Hydrant Fuel System, which would be located approximately 0.3 mile northwest of the Proposed Action location (0.15 mile east of Alternative B).

### 4.2.1 Anticipated Cumulative Impacts

**4.2.1.1 Airfield Operations.** The construction schedule of the Proposed Action has the potential to result in impacts to the WSD EUL project. If construction the 75th SFS facility is delayed, demolition in the WSD area would need to be postponed. No operations-related cumulative impacts are anticipated.

**4.2.1.2 Noise.** It is highly likely that Hill AFB will be selected as one of the bases where the new F-35 Joint Strike Fighter aircraft will be based. Flights by the F-35 would necessitate an AICUZ noise contour revision, which would possibly extend the noise contours into both the Proposed Action and Alternative B sites.

**4.2.1.3** According to Air Force Handbook 32-7084, “AICUZ Program Manager’s Guide” (Secretary of the Air Force, 1999), Attachment 4, “Land Use Compatibility,” the Proposed Action is generally considered to be compatible with AICUZ noise contours for Hill AFB’s airfield. Specifically, the table lists the following land uses as not compatible with noise zones of more than 80 dB: retail trade – general merchandise, retail trade – eating and drinking establishments, business services, professional services, and government services. However, all of these land uses would be considered compatible uses in noise

zones of 75 to 79 dB if measures to achieve noise level reduction to 70 to 74 dB DNL are incorporated into the design and construction of structures.

**4.2.1.4 Air Quality.** Based on the number of concurrently scheduled construction projects in the vicinity of the Proposed Action, construction-related emissions would not have a significant cumulative impact.

**4.2.1.5 Hill AFB air quality managers** would comply with the existing air quality guidelines such as the Hill AFB Title V Permit, any relevant approval orders, EPA regulations, and the Utah SIP for the long-term operation of the Proposed Action. All required air quality control devices would be installed and tested prior to allowing newly installed equipment to begin operating. Operations-related emissions in the vicinity of both the Proposed Action and Alternative B sites would not result in cumulative impacts to the air quality in the vicinity of Hill AFB.

**4.2.1.6 Safety and Occupational Health.** Use of best management practices and operation and construction in accordance with existing guidelines maximizes the safety and occupational health of construction workers and base employees. Cumulative effects to safety and occupational health would not occur.

**4.2.1.7 Earth Resources.** For the Proposed Action and other actions considered in this cumulative assessment, site preparation would disturb surface soils and new construction would cover the soil surface. Operation of new facilities would not result in cumulative impacts to earth resources.

**4.2.1.8 Infrastructure and Utilities.** Construction of the projects in the vicinity of the Proposed Action and Alternative B sites would result in updated infrastructure and utilities. Properly constructed utility connections would result in no cumulative impacts associated with operation of the new facilities.

**4.2.1.9 Hazardous Material and Waste.** Proper handling of hazardous material and waste eliminates releases of contaminants to the environment. No cumulative impacts associated with hazardous materials or hazardous waste would occur.

## **4.3 Unavoidable Adverse Environmental Impacts**

**4.3.0.1** No significant unavoidable adverse environmental impacts are anticipated in connection with the No-Action, Proposed Action, or Alternative B because all impacts are temporary (construction-related) and minor.

## **4.4 Relationship between the Short-term Use of the Environment and Long-term Productivity**

**4.4.0.1** Construction at the Proposed Action and Alternative B sites would disturb and mix soils near the ground surface. Most of the completed site would be covered in hard surfaces, and existing vegetation and wildlife would be displaced. The project, however, is situated in a high desert environment with relatively uniform soils and sparse natural vegetation. This lack of suitable habitat keeps the wildlife population low and limits its

diversity. If structures were cleared, the site could be restored to natural conditions in a relatively short period of time.

## 4.5 Irreversible and Irretrievable Commitments of Resources

4.5.0.1 The consumption of fossil fuels during construction activities may be offset by the use of alternative energy sources. It is possible that, at least during construction, the consumption of fossil fuels may be irretrievable or irreversible. However, consumption of these fuels, given current technology, is unavoidable. Timber would be consumed in construction, but timber is a renewable resource. The Proposed Action would not result in a loss of critical habitat or threatened and endangered species, nor would there be a loss of rare or unusual ecological units. The Proposed Action would not cause an irreversible and irretrievable commitment of resources.

**THIS PAGE INTENTIONALLY LEFT BLANK**



## 5.0 List of Preparers

---

5.0.0.1 The following personnel contributed technical information to the EA:

### Hill AFB Personnel

- Marcus Blood, Hill AFB Natural Resources Project Manager, 75 CEG/CEVR
- Brandon Chard, Hill AFB Environmental Management IRP Project Manager, 75 CEG/CEVOR
- Wayne Downs, Hill AFB Hazardous Materials and Waste Project Manager, 75 CEG/CEVC
- Jaynie Hirschi, Hill AFB Cultural Resources Project Manager, 75 CEG/CEVOR
- Mark Holt, Hill AFB Enhanced Use Lease Project Engineer, OO-ALC/XP-EUL
- Joe Linford, Hill AFB Environmental Counsel, OO-ALC/JACE
- Mark Loucks, Hill AFB Environmental Management Division Chief, 75 CEG/CEVOR
- Glenn Palmer, Hill AFB Air Quality Program Manager, 75 CEG/CEVOC
- Mike Petersen, Hill AFB Surface Water Project Manager, 75 GEC/CEVOC
- Kay Winn, Hill AFB NEPA Project Manager, 75 CEG/CEVOR

### CH2M HILL Personnel

- Staci L. Hill, P.E., CH2M HILL Project Manager
- Wendy Longley-Cook, Ph.D., P.E., CH2M HILL Senior Technical Consultant
- Megan Nite, CH2M HILL Project GIS Specialist
- Jessica Pickard, CH2M HILL Project Engineer
- Christine Roberts, CH2M HILL Senior Technical Consultant

**THIS PAGE INTENTIONALLY LEFT BLANK**

## 6.0 References

---

- 16 USC 470 *et seq.*, Public Law 89-665 Stat. 915. 1966. National Historic Preservation Act of 1966 as Amended.
- Barnes, J.D., L.N. Miller, and E.W. Wood. 1977. *Power Plant Construction Noise Guide*. Empire State Electric Energy Research Corporation.
- Blood, Marcus. 2007. *Hill AFB Natural Resource Project Manager*. E-mail. November 29, 2007.
- Brown, Morton W. and Gary L. Hume. 1995. *The Secretary of the Interior's Standards for Historic Preservation Projects with Guidelines for Applying the Standards*. Washington, DC, Department of Interior.
- CH2M HILL. 2008. *Final Environmental Assessment for the West Side Development Enhanced Use Lease at Hill Air Force Base, Utah*. July.
- Department of Defense (DoD). 2003. DoD United Facilities Criteria (UFC) 4-010-01. DoD Anti-terrorism Standards for Buildings. [http://www.wbdg.org/ccb/DOD/UFC/ufc\\_4\\_010\\_01.pdf](http://www.wbdg.org/ccb/DOD/UFC/ufc_4_010_01.pdf). October 8.
- Department of Defense (DoD). 2006. DoD Instruction 2000.16 *DoD Antiterrorism Standards*. December.
- Department of the Air Force. 1996. Air Force Occupational and Environmental Safety, Fire Protection, and Health (AFOSH) Program. <http://www.e-publishing.af.mil/shared/media/epubs/AFI91-301.pdf>. June 1. June 1.
- Department of the Air Force. 1999. Title 32 of the *Code of Federal Regulations*. [http://www.access.gpo.gov/nara/cfr/waisidx\\_01/32cfr989\\_01.html](http://www.access.gpo.gov/nara/cfr/waisidx_01/32cfr989_01.html).
- Environmental Protection Agency (EPA). 1971. *Noise from Construction Equipment and Operations, US Building Equipment, and Home Appliances*. Prepared by Bolt, Beranek & Newman, Inc., for Office of Noise Abatement and Control.
- EPA. 1977. Clean Water Act. US Code Title 33 Chapter 26.
- EPA, 1978. Title 40 of the *Code of Federal Regulations*, Parts 1500-1508. Council on Environmental Quality. [http://www.access.gpo.gov/nara/cfr/waisidx\\_05/40cfrv31\\_05.html#1500](http://www.access.gpo.gov/nara/cfr/waisidx_05/40cfrv31_05.html#1500)
- EPA. 1987. Water Quality Act US Code Title 33 1251-1376.
- EPA. 1990. Clean Air Act and Amendments. US Code Title 42 Chapter 85.
- EPA. 2008. Environmental Justice Geographic Assessment Tool. <http://www.epa.gov/enviro/html/em/index.html>. Accessed March 2008.
- Fisher, Barbara. 2006. *75th ABW Public Affairs*. Personal Communications. June.
- Hill AFB. 2003a. *2003 Base Guide and Telephone Directory*. San Diego, California.

- Hill AFB. 2003b. *Hill Air Force Base Main Base Fugitive Dust Control Plan*. Hill AFB, Utah. September.
- Hill AFB. 2006. *Air Force Instruction 32-7086 Hazardous Materials Management Hill Air Force Base Supplement*. December.
- Hill AFB. 2007a. *Hill AFB Integrated Natural Resources Management Plan*. August.
- Hill AFB. 2007b. *Hill AFB Integrated Cultural Resources Management Plan*. Hill AFB, Utah. January.
- Hirschi, Jaynie. 2008. *Hill AFB Cultural Resources Project Manager*. Personal Communications (telephone and e-mail) January through April.
- Loucks, Mark. 2007. *Hill AFB Section Chief CEVOR*. Email. December 18.
- Miller, L. N., E. W. Wood, R.M. Hoover, A.R. Thompson, S.L. Thompson, and S.L. Paterson. 1978. *Electric Power Plant Environmental Noise Guide, Vol. 1*. Prepared by Bolt, Beranek & Newman, Inc., for the Edison Electric Institute.
- National Environmental Policy Act (NEPA). 1969. Accessed December. <http://www.nepa.gov/nepa/regs/nepa/nepaeqia.htm>.
- Occupational Safety and Health Administration (OSHA). 2004. Public Law 91-596 December 29, 1970, as amended through January 1, 2004. Accessed December. [http://www.osha.gov/pls/oshaweb/owadisp.show\\_document?p\\_table=OSHACT&p\\_id=3355](http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=OSHACT&p_id=3355).
- Palmer, Glenn. 2007. *Hill AFB Air Quality Program Manager*. November 27, 2007 e-mail.
- Presidential Documents, 1997. Executive Order 13045 – Protection of Children from Environmental Health Risks and Safety Risks. April 21.
- Secretary of the Air Force. 1999. Air Force Handbook 32-7084. *AICUZ Program Manager's Guide*. March 2.
- Secretary of the Air Force. 2004. Air Force Instruction 32-7086 – *Hazardous Materials Management*. November 1.
- U.S. Department of Agriculture (USDA). 1966. National Historic Preservation Act. <http://www.usda.gov/rus/water/ees/pdf/nhpa.pdf>.
- U.S. Department of Housing and Urban Development. 1994. Executive Order 12898 – Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations. February 11.
- U.S. Department of the Interior, U.S. Fish and Wildlife Service (USFWS). 1973. Endangered Species Act. <http://www.fws.gov/endangered/pdfs/ESAall.pdf>.
- Utah Division of Air Quality (UDAQ). 2007. *Area Designation Recommendation for the 2006 PM<sub>2.5</sub> NAAQS*. December 18.

## 7.0 List of Persons and Agencies Consulted

---

7.0.0.1 The following agencies and persons were consulted during the preparation of this EA.

- CH2M HILL, Associate Scientist, Hill AFB Air Quality Project Manager, Melissa Cary, [melissa.cary@ch2m.com](mailto:melissa.cary@ch2m.com), (801) 775-6989 – discussed fugitive emissions and attainment status at Hill AFB. December 2007.
- Hill AFB, 75th ABW, Public Affairs, Barbara Fisher, [barbara.fisher@hill.af.mil](mailto:barbara.fisher@hill.af.mil), (801) 777-4557 – discussed makeup of Hill AFB workforce. June 2006.
- Hill AFB, Environmental Management Division, Archaeologist, Jaynie Hirschi, [jaynie.hirschi@hill.af.mil](mailto:jaynie.hirschi@hill.af.mil), (801) 775-6920 – discussed historic building information. August 2008.
- Hill AFB, Environmental Management Division, Natural Resources Geographic Information Systems Specialist, Russ Lawrence, [russell.lawrence2@hill.af.mil](mailto:russell.lawrence2@hill.af.mil), (801) 775-6972 – discussed flora and fauna of Hill AFB. January 2008.
- Hill AFB, Environmental Management Division, Natural Resources Manager, Marcus Blood, [marcus.blood@hill.af.mil](mailto:marcus.blood@hill.af.mil), (801) 775-4618 – discussed endangered species at Hill AFB. November 2007.
- Utah State Historic Preservation Office. Acting Deputy State Historic Preservation Officer, Archaeology, James Dykmann, [jdykmann@utah.gov](mailto:jdykmann@utah.gov), (801) 533-3555 – review Proposed Action to determine concurrence for no adverse effect to historic properties.

7.0.0.2 To fully comply with NEPA regulations, a copy of the Proposed Final Environmental Assessment will be made available for public review and comment.

**THIS PAGE INTENTIONALLY LEFT BLANK**

APPENDIX A

## SHPO Consultation

---







DEPARTMENT OF THE AIR FORCE  
75TH CIVIL ENGINEER GROUP (AFMC)  
HILL AIR FORCE BASE UTAH

19 August 2008

Dr. W. Robert James  
Chief, Environmental Management Division  
75th CEG/CEV  
7274 Wardleigh Road  
Hill Air Force Base, Utah 84056-5137

Mr. James L. Dykmann  
Acting Deputy State Historic Preservation Officer  
300 Rio Grande  
Salt Lake City, Utah 84101

Dear Mr. Dykmann

Hill Air Force Base (AFB) is currently proposing to construct a new Security Forces Facility to replace its current facility, proposed for demolition as part of the West Side Development Enhanced Use Lease project. The proposed action includes construction of a 35,000 square-foot facility to serve as a focal point for antiterrorism, resource protection, pass and registration, tactical deception, and security programs. The Area of Potential Effect (APE) is approximately six acres of property (Attachment 1, Area of Potential Effect for Proposed Security Forces Facility).

Within Hill AFB, three previous inventories have comprised cultural resources survey of 840 acres (U-91-WC-687m, U-95-WC-280p, and U-01-HL-0164m). Results from these projects include the recordation of one historic refuse dump (42Dv51) and two prehistoric isolates, all determined ineligible for listing in the National Register of Historic Places. Inventory efforts have resulted in the survey of 12.5 percent of the total area of Hill AFB. None of the previous inventories fall within the APE of the current proposed project.

Building construction and associated infrastructure will encompass the entire APE of the current project. Given the lack of previous findings and the extensive development and disturbance of Hill AFB, the potential for archaeological historic properties is extremely low; however, if any archaeological resources are found during construction, ground-disturbing activities in the immediate vicinity will cease, the Hill AFB Cultural Resources Program will be notified, and the unanticipated discovery of archaeological deposits procedures shall be implemented with direction from the Hill AFB Cultural Resources Program and in accordance with the Hill AFB Integrated Cultural Resources Management Plan (Attachment 2, Unanticipated Discovery of Archaeological Deposits).

Therefore, Hill AFB has determined the proposed project will have no adverse effect to historic properties [36 CFR §800.4(d)(1)]. I request your concurrence in these determinations as specified in 36 CFR §800.

An Environmental Assessment has been prepared for the proposed Security Forces Facility. If you would like a copy of this document to review, or should you or your staff have any questions about the project, please contact our archaeologist, Ms. Jaynie Hirschi, 75th CEG/CEVOR, at (801) 775-6920 or at [jaynie.hirschi@hill.af.mil](mailto:jaynie.hirschi@hill.af.mil).

Sincerely

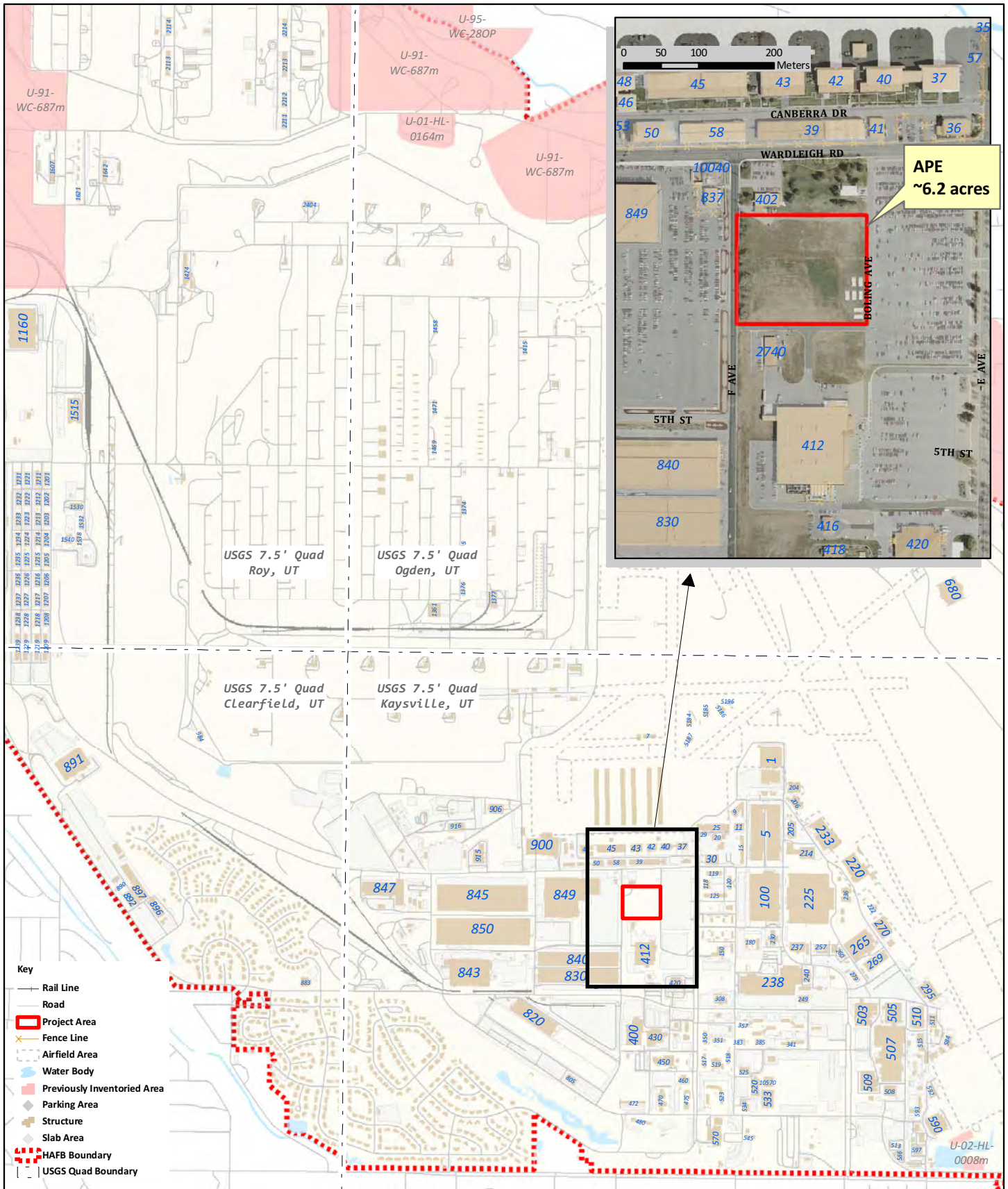
A handwritten signature in blue ink, appearing to read "W. Robert James", is written over a horizontal line.

W. ROBERT JAMES, Ph.D., P.E.  
Chief, Environmental Management Division  
75th Civil Engineer Group

Attachments:

1. Area of Potential Effect for Proposed Security Forces Facility
2. Unanticipated Discovery of Archaeological Deposits





Area of Potential Effects for  
Proposed Security Forces Facility  
Hill Air Force Base, Utah

# *Standard Operating Procedure*

## **UNANTICIPATED DISCOVERY OF ARCHAEOLOGICAL DEPOSITS**

### **APPLICABLE LAWS AND REGULATIONS**

- ◆ National Historic Preservation Act
- ◆ National Environmental Policy Act
- ◆ Native American Graves Protection and Repatriation Act
- ◆ AFI 32-7065 (June 2004), *Cultural Resources Management Program*

### **OVERVIEW**

All undertakings that disturb the ground surface have the potential to discover buried and previously unknown archaeological deposits. The accidental discoveries of archaeological deposits during an undertaking can include but are not limited to:

- ◆ Undiscovered/undocumented structural and engineering features; and
- ◆ Undiscovered/undocumented archaeological resources such as foundation remains, burials, artifacts, or other evidence of human occupation.

### **POLICY**

When cultural resources are discovered during the construction of any undertaking or ground-disturbing activities, Hill AFB shall:

- ◆ Evaluate such deposits for NRHP eligibility.
- ◆ Treat the site as potentially eligible and avoid the site insofar as possible until an NRHP eligibility determination is made.
- ◆ Make reasonable efforts to minimize harm to the property until the Section 106 process is completed.
- ◆ **The BHPO will ensure that the provisions of NAGPRA are implemented first if any unanticipated discovery includes human remains, funerary objects, or American Indian sacred objects (see SOP #6).**

### **PROCEDURE**

Step 1: Work shall cease in the area of the discovery (Figure 5-5). Work may continue in other areas.

- ◆ The property is to be treated as eligible and avoided until an eligibility determination is made. Hill AFB will continue to make reasonable efforts to avoid or minimize harm to

Further construction activities in the vicinity of the site will be suspended until an agreed-upon testing strategy has been carried out and sufficient data have been gathered to allow a determination of eligibility. The size of the area in which work should be stopped shall be determined in consultation with the **BHPO**.

the property until the Section 106 process is completed.

Step 2: Immediately following the discovery, the **Project Manager** shall notify the installation **BHPO**.

Step 3: The **BHPO** or a professional archaeologist shall make a field evaluation of the context of the deposit and its probable age and significance, record the findings in writing, and document with appropriate photographs and drawings.

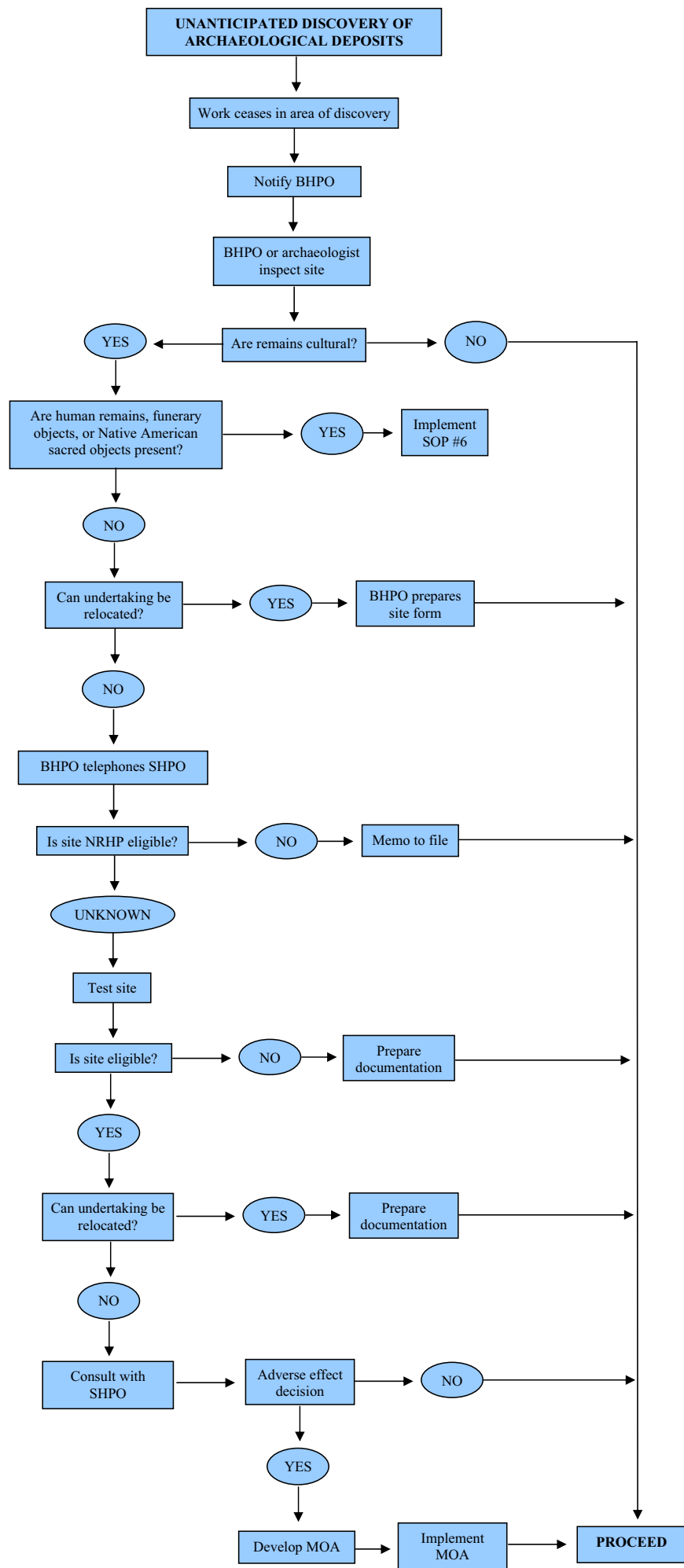
- ◆ If disturbance of the deposits is minimal and the excavation can be relocated to avoid the site, the **BHPO** will file appropriate site forms in a routine manner.
- ◆ If the excavation cannot be relocated, the **BHPO** shall notify the office of the **SHPO** to report the discovery and to initiate an expedited consultation.

*The Section 106 review process is initiated at this point.*

- ◆ If the deposits are determined to be ineligible for inclusion in the NRHP, then Hill AFB **BHPO** will prepare a memorandum for record and the construction may proceed.
- ◆ If the existing information is inadequate for an NRHP eligibility determination, Hill AFB **BHPO** shall develop an emergency testing plan in coordination with the SHPO.

Step 4: Hill AFB shall have qualified personnel conduct test excavations of the deposits to determine NRHP eligibility.

- ◆ Hill AFB BHPO, in consultation with the SHPO, will determine appropriate methodology for NRHP eligibility determination.
- ◆ If the SHPO and Hill AFB agree that the deposits are ineligible for inclusion in the NRHP, then work on the undertaking may proceed.
- ◆ If the deposits appear to be eligible, or Hill AFB and the SHPO cannot agree on the question of eligibility, then Hill AFB shall implement alternative actions, depending on the urgency of the proposed action.
  - Hill AFB may relocate the project to avoid the adverse effect.
  - Hill AFB may request the Keeper of the National Register to provide a determination.
  - Hill AFB may proceed with a data recovery plan under a MOA developed in coordination with the SHPO and possibly the ACHP and interested parties.
  - **Hill AFB may request comments from the ACHP and may develop and implement actions that take into account the effects of the undertaking on the property to the extent feasible and the comments of the SHPO, ACHP, and interested parties. Interim comments must be provided to Hill AFB within 48 hours; final comments must be provided within 30 days.**







## State of Utah

JON M. HUNTSMAN, JR.  
*Governor*

GARY R. HERBERT  
*Lieutenant Governor*

## Department of Community and Culture

PALMER DePAULIS  
*Executive Director*

### State History

PHILIP F. NOTARIANNI  
*Division Director*

September 3, 2008

Ms Jaynie Hirschi  
Archaeologist  
75th CEG/CEVOR  
7274 Wardleigh Road  
Hill Air Force Base UT 84056-5137

RE: Hill AFB Security Forces Facility

In Reply Please Refer to Case No. 08-1471

Dear Ms Hirschi:

The Utah State Historic Preservation Office received your request for our comment on the above-referenced project on August 26, 2008.

We concur with your determinations of **No Adverse Effect, §36 CFR 800.5(b)**.

This letter serves as our comment on the determinations you have made, within the consultation process specified in §36CFR800.4. If you have questions, please contact me at (801) 533-3555 or [jdykman@utah.gov](mailto:jdykman@utah.gov).

As ever,

James L. Dykman  
Deputy State Historic Preservation Officer - Archaeology

UTAH STATE  
HISTORY

UTAH STATE HISTORICAL SOCIETY  
ANTIQUITIES  
HISTORIC PRESERVATION  
RESEARCH CENTER & COLLECTIONS

300 S. RIO GRANDE STREET, SALT LAKE CITY, UT 84101-1182 • TELEPHONE 801 533-3500 • FACSIMILE 801 533-3503 • [HISTORY.UTAH.GOV](http://HISTORY.UTAH.GOV)

